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**QUEENSLAND HEALTH, ALLIED HEALTH  
PRE-ENTRY SCHOLARSHIP/NON-SCHOLARSHIP SURVIVAL  
ANALYSIS REPORT  
AN ADDITION TO QUEENSLAND HEALTH, ALLIED HEALTH  
PRE-ENTRY SCHOLARSHIP REVIEW**

**Report submitted to:**

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## Executive Summary

### **Background:**

In May 2011 a report reviewing the Queensland Health Allied Health Pre-Entry Scholarships was submitted to Julie Hulcombe, Director Allied Health Workforce Advice and Coordination Unit, Queensland Health. Within this report a survival analysis was used to present survival probabilities for rural service of Queensland Health scholarship holders. As a result of the initial survival analysis further analysis was requested regarding survival probabilities in rural service for non-Queensland Health scholarship holders compared to scholarship holders.

### **Aim:**

The aim of this analysis was to compare Queensland Health rural service survival probabilities of Queensland Health rural scholarship holders with the Queensland Health rural service survival probabilities of non-scholarship holders.

### **Methods:**

Queensland Health scholarship holder data was sourced from the initial review submitted in May 2011. This data was established using payroll tracking data and had previously been imported into SPSS (version 18). Non-scholarship holder data was provided in an excel format which had been extracted from Queensland Health payroll tracking data.

Kaplan-Meier survival analysis was performed using a log rank test regarding both Queensland Health scholarship holders and non-scholarship holders and rural service to estimate survival probabilities. A Mann Whitney U test was employed to compare actual service times recorded in rural practice.

### **Results:**

The cumulative survival probability for QHRSS-AH rural service was found to be 0.482 at the median survival point of 42.4 months (95% CI: 20.11 months – 64.69 months). The cumulative survival probability for the non-scholarship holder group was calculated at 0.491 at the median survival point of 27.9 months (95% CI: 18.85 months – 36.93 months). A significant difference was identified between the median survival times of the groups ( $p=0.003$ ) suggesting that QHRSS-AH recipients had a significantly greater median survival time.

The observed median rural service time for QHRSS-AH recipients was 24 months (IQR: 9.7-32.7 months) while the observed median rural service time for non-scholarship holders was 17.9 months (IQR: 9.9-33.9 months). No significant differences were identified in observed median rural service times ( $p=0.09$ ) between the QHRSS-AH recipient group and the non-scholarship holder group.

***Key Findings and Conclusions:***

1. The scholarship holder group were found to experience a modest survival advantage compared to the non-scholarship holder comparison group, largely through reduced attrition in the first two years of practice. This finding should be interpreted carefully in light of unquantifiable bias resulting in a likely underestimation of the non-scholarship holder group's retention, especially in the first 12 months following commencement in rural practice.
2. In the observed period from July 2003 – October 2010 there was no statistically significant difference in median service time between the scholarship holder and non-scholarship holder group.
3. The interpretation of the median service time and median survival time findings is that although both groups were observed in the study period to experience similar periods of service in rural or remote areas, the pattern of attrition between the two groups varies. Non-scholarship holder early career professionals entering rural or remote practice settings have a relatively even attrition rate, whereas scholarship holder experience less attrition in the first 2-3 years following commencement with a subsequent rapid acceleration in attrition.
4. The methodology of the study does not allow a clear attribution of causation for differences between the scholarship holder and non-scholarship holder group to an intervention effect of the QHRSS-AH program. In particular selection bias cannot be discounted as a potential impactor. Further longitudinal studies would be required to clearly articulate the cause of any observed differences.

## Introduction:

In May 2011 a report reviewing the Queensland Health Allied Health Pre-Entry Scholarships was submitted to Julie Hulcombe, Director Allied Health Workforce Advice and Coordination Unit, Queensland Health. The purpose of this review was to evaluate the effectiveness of the Area of Priority Scholarship Scheme and the Queensland Health Rural Scholarship Scheme (Allied Health) in enhancing early career recruitment and retention in rural and remote areas and areas of critical need. The review was conducted in two stages. Stage one was a literature review while stage two used a mixed methods approach that consisted of quantitative analysis of existing Queensland Health scholarship data and a qualitative study that used one on one in-depth telephone interviews with past or current scholarship holders and the managers of scholarship holders. The quantitative analysis provided descriptive data along with survival probabilities estimating survival in rural service for scholarship holders. As a result of the initial survival analysis further analysis was requested regarding survival probabilities in rural service for early career rural service recruits who were not scholarship holders. This report describes the process undertaken in order to complete the final analysis and presents the results from this process.

## Aim:

The aim of this analysis was to compare Queensland Health rural service survival probabilities of Queensland Health allied health rural scholarship holders with the Queensland Health rural service survival probabilities of non-scholarship holder early career allied health professionals recruited to rural services.

## *Hypothesis:*

- 1. Null Hypothesis:** No significant difference between median survival times for Queensland Health rural service exists between scholarship holders and non-scholarship holders.

**Alternate Hypothesis:** A significant difference between median survival times for Queensland Health rural service exists between scholarship holders and non-scholarship holders.

**2. Null Hypothesis:** No significant difference between median observed rural service times exists between scholarship holders and non-scholarship holders.

**Alternate Hypothesis:** A significant difference between median observed rural service times exists between scholarship holders and non-scholarship holders.

## Methods:

### ***Data Collection:***

Queensland Health scholarship holder data was sourced from the initial review submitted in May 2011. This data was established using payroll tracking data and had previously been imported into SPSS (version 18). Non-scholarship holder data was provided in an excel format which had been extracted from Queensland Health payroll tracking data. In order to ensure the two populations (scholarship holders/non-scholarship holders) were as similar as possible data collection parameters were established. These parameters were designed to control for covariates and allow scholarships to be the variable of interest. The data included allied health disciplines corresponding to that of the original scholarship holder data, the capture period also corresponded to the initial scholarship holder data and ran from July 2003 to October 2010. Data was included if employees had entered rural or remote service within the first three years of practice. Data was restricted to those who had at least four successive pay months in a rural or remote location to limit inclusion of data from non-scholarship holders that had only completed a short locum in a rural or remote location. Individuals that appeared in the data in rural positions for less than four months and were not recorded by Queensland Health pay role data following this were also excluded as it was not possible to ascertain the motivation for such a short Queensland Health employment tenure, and it was possible that these individuals could contaminate the data. It should also be noted that given the nature of the data collection process it was not possible to isolate individuals that may have entered a rural setting on a fixed term contract greater than a four month period (e.g. maternity leave cover). Queensland Health have advised that given the nature of the data it is not possible to accurately quantify this sub-population however it is likely to be not inconsiderable. The employee identification numbers used to generate the scholarship holder data set for the initial review were excluded to ensure no duplication occurred in the non-scholarship holder data set. Employees that did not stay at early career pay points for reasonable expected periods were also excluded from the data set as it was assumed that these employees experienced delays in having prior service recognised. Determination of eligible service locations for the purpose of inclusion in the data set was based

on the same process used in the initial report. Rural and Remote categories align to Category A and Category B locations respectively as listed in the Queensland Health Human Resource Policy C42 which is available from: <http://www.health.qld.gov.au/ghpolicy/docs/pol/gh-pol-146.pdf>.

Data from the non-scholarship holder group was then imported into an SPSS (Version 18) data set and combined with the original scholarship holder data for ease of analysis (all data was de-identified upon import). All numeric data was checked for normal distribution and reported accordingly.

***Data Analysis:***

Kaplan-Meier survival analysis was performed using a log rank test regarding both Queensland Health scholarship holders and non-scholarship holders and rural service in order to identify and compare the survival probability within rural service of both groups (scholarship holders and non-scholarship holders). Cumulative probabilities were based on maximum service time for each group, 88 months for non-scholarship holders and 96 months for scholarship holders. Data was censored to compensate for participants entering the data recording phase at different stages during the time period. Survival probability is calculated after each event (in this case an event is defined as leaving Queensland Health rural service prior to the end of the data collection period). Probabilities are recalculated after each event providing cumulative probabilities as each event occurs.

A Mann Whitney U test was employed to investigate the existence of significant differences between median observed rural service times for both groups. Non-parametric tests were employed as data had previously been tested for normal distribution and found not to meet the assumptions of normal distribution. Survival estimations should not be associated with median service times when interpreting reports. Median service times are a reflection of the available recorded observations (actual time served in rural location) where as Median survival times are statistical estimations of service survival based on probabilities calculated at each exit point.

## Results:

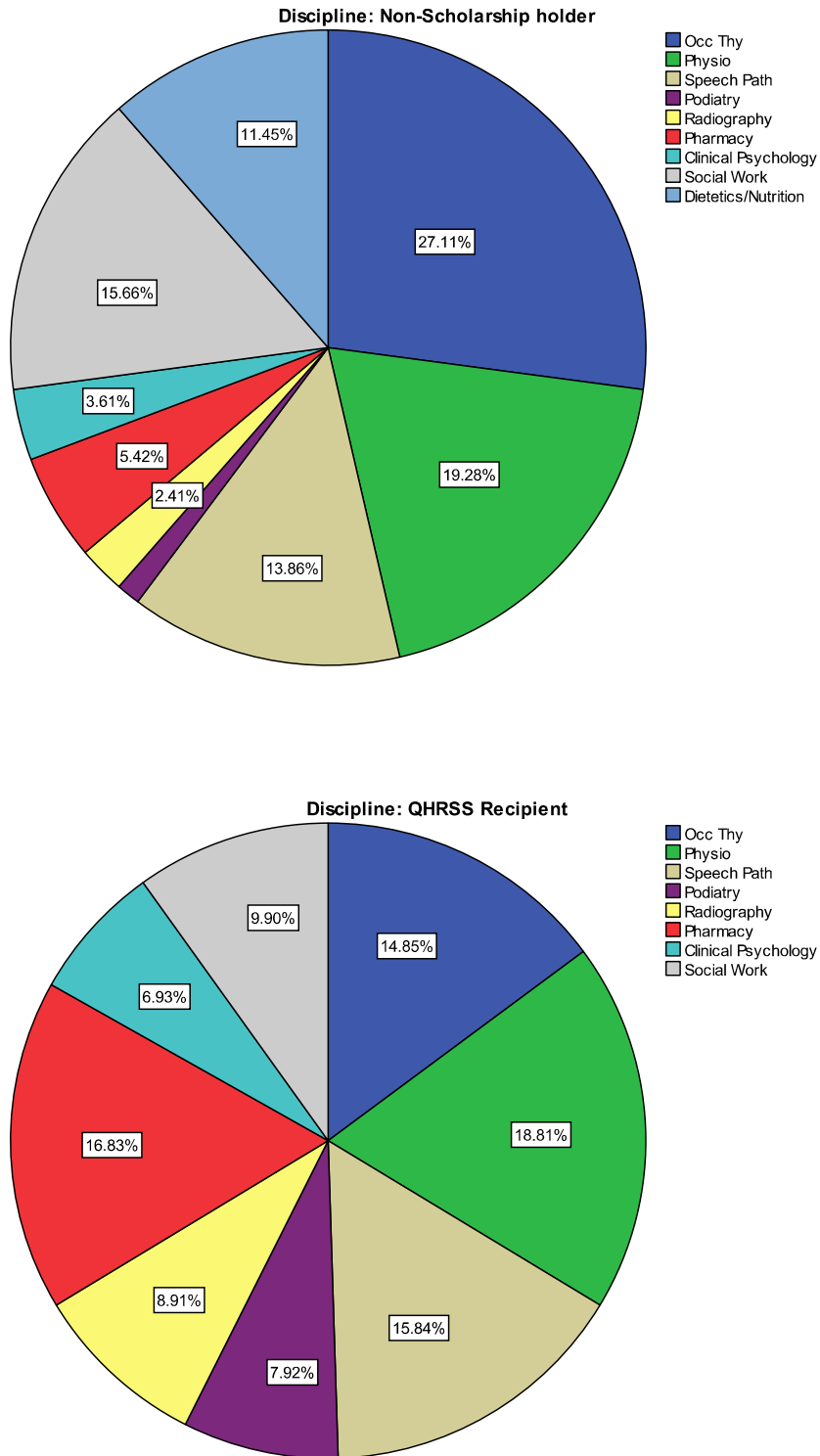
Available data consisted of a combined total of 267 Queensland Health employees both Queensland Health Rural Scholarship Scheme – Allied Health (QHRSS-AH) recipients and non-scholarship holders (101 and 166 respectively). An overall summary of the data is provided in Table 1 from a univariate perspective.

Table 1. Overall Univariate Summary

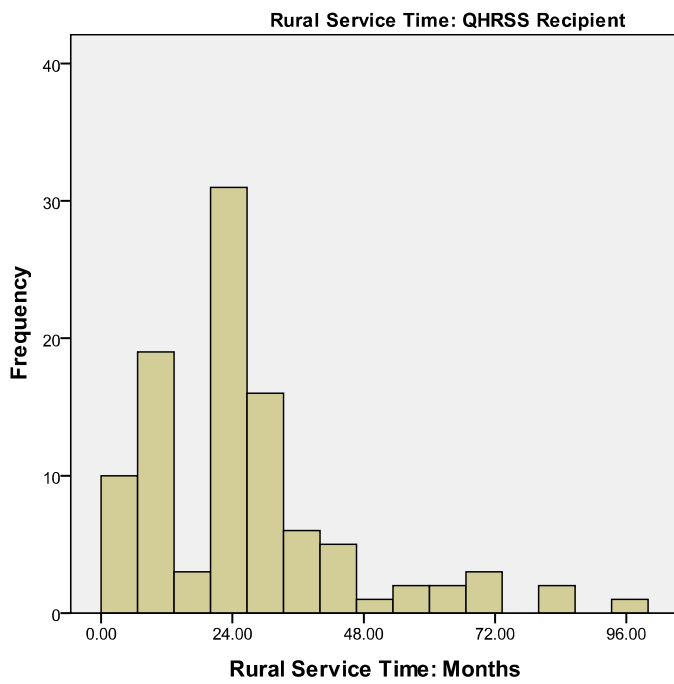
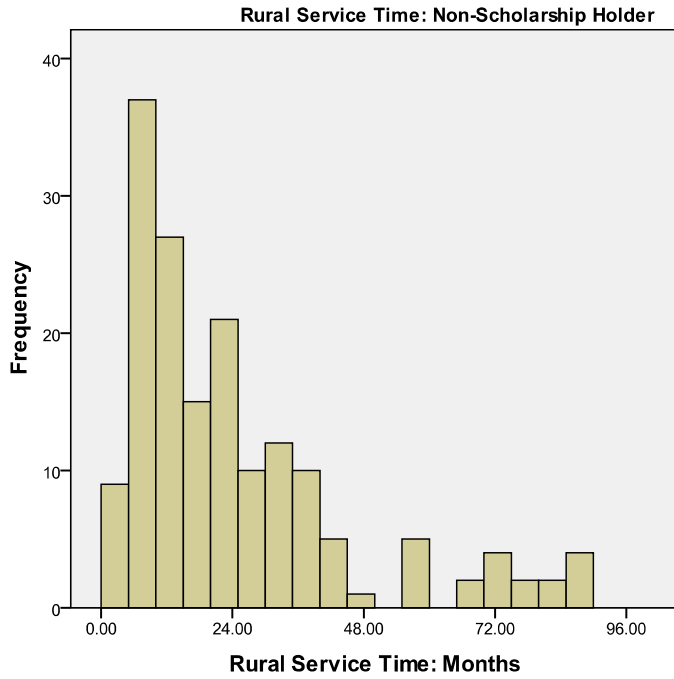
Variable Characteristic	Summary Statistics; Measure of Dispersion
<b>% Discipline QHRSS recipients (n=101)</b>	
Occupational Therapy	14.9%
Physiotherapy	18.8%
Speech Pathology	15.8%
Podiatry	7.9%
Radiography	8.9%
Pharmacy	16.8%
Clinical Psychology	6.9%
Social Work	9.9%
Dietetics/Nutrition	0.0%
<b>% Discipline non-scholarship holders (n=166)</b>	
Occupational Therapy	27.1%
Physiotherapy	19.3%
Speech Pathology	13.9%
Podiatry	1.2%
Radiography	2.4%
Pharmacy	5.4%
Clinical Psychology	3.6%
Social Work	15.7%
Dietetics/Nutrition	11.4%
<b>Median Rural Service Time, [IQR], range</b>	
QHRSS Recipients (n=101)	24.0months, [9.7-32.7months], 0-96months
Non-Scholarship (n=166)	17.9months, [9.9-33.9months], 4-88months
<b>Rural Service Survival Probability at median survival point</b>	
QHRSS Recipients (n=101)	0.482: median survival: 42.4 months
Non-Scholarship (n=166)	0.491: median survival: 27.9 months



**Figure 1: Disciplines**



**Figure 2: Rural Service Distribution**



Kaplan-Meier survival analysis was performed using both QHRSS-AH recipients and non-scholarship holders in order to identify rural service survival probabilities. A log rank test was also employed to identify significant differences in median survival times. The cumulative survival probability for QHRSS-AH rural service was found to be 0.482 at the median survival point of 42.4 months (95% CI: 20.11 months – 64.69 months). Within this group the most noticeable event occurred at 24 months with the cumulative survival probability dropping from 0.866 at 11.5 months to 0.724 at 24 months. For QHRSS-AH recipients the probability of completing 42.4 months rural service (estimated median survival time) is estimated to be 48.2%. The cumulative survival probability for the non-scholarship holder group was calculated at 0.491 at the median survival point of 27.9 months (95% CI: 18.85 months – 36.93 months). Within the non-scholarship holder group a larger number of events were observed throughout the data collection period (non-scholarship holders 97 event, QHRSS-AH 36 event) with survival probability falling below 0.9 after 6 months. A significant difference was identified between the median survival times of both groups ( $p=0.003$ ) suggesting that QHRSS-AH recipients had a significantly greater median survival time. Survival estimations should not be associated with median service times when interpreting reports.

A Mann Whitney U test was also employed to investigate differences in observed median rural service times between each group. The observed median rural service time for QHRSS-AH recipients was 24 months (IQR: 9.7-32.7 months) while the observed median rural service time for non-scholarship holders was 17.9 months (IQR: 9.9-33.9 months). No significant differences were identified in observed median rural service times ( $p=0.09$ ) between the QHRSS-AH recipient group and the non-scholarship holder group.

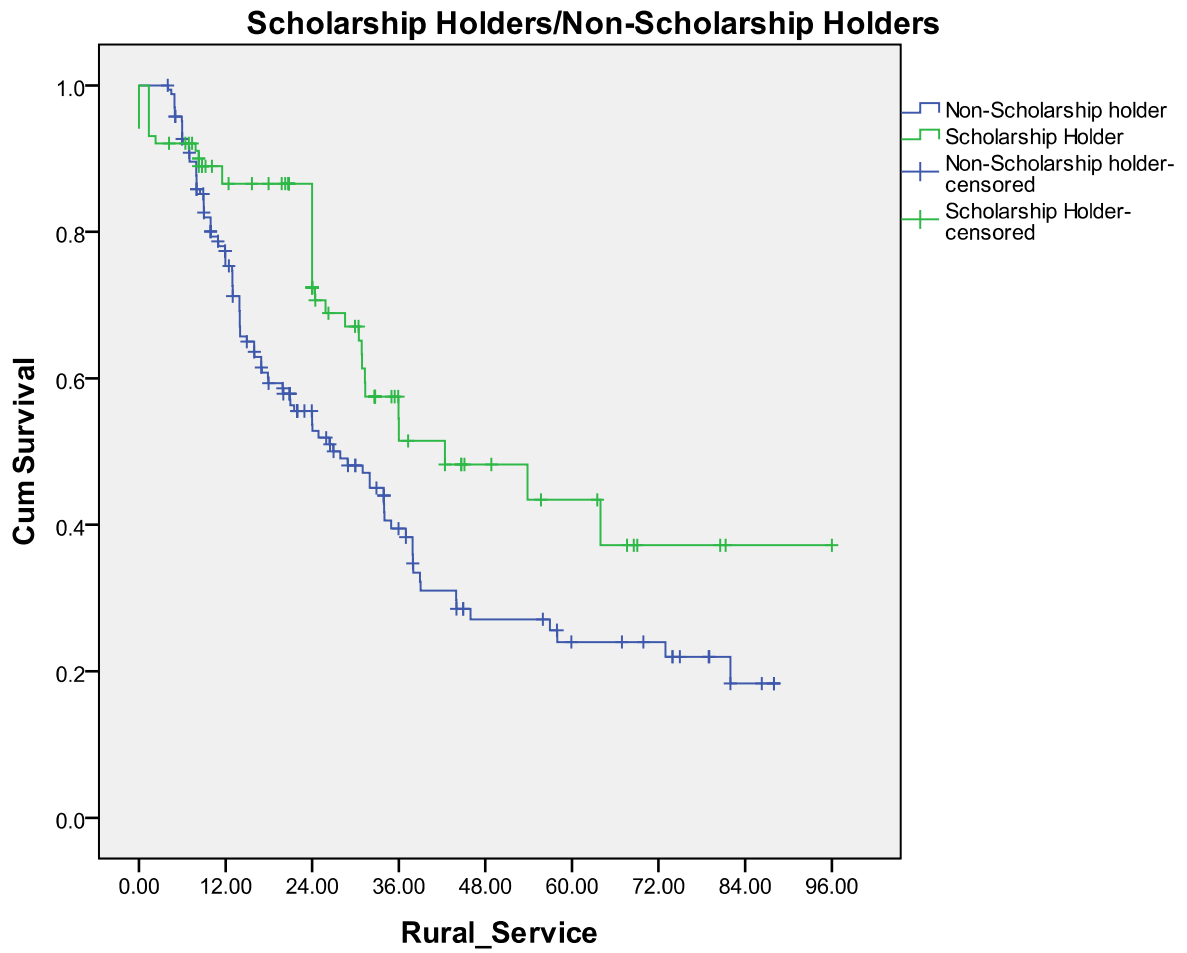
Univariate analysis identified differences in the distribution of disciplines between the two groups (QHRSS-AH and non-scholarship holders). Using a Fishers exact test it was determined that this difference was significant ( $p<0.001$ ).

**Table 2: Bivariate Results**

Median Survival Probability	Test Result
<b>QHRSS:</b> 0.482: 42.4 months 95% CI: 20.11 months – 64.69 months <b>Non-Scholarship:</b> 0.491: 27.9 months 95% CI: 18.85 months – 36.93 months	p=0.003*
Median Service Times	
<b>QHRSS:</b> 24 months <b>Non-Scholarship:</b> 17.9 months	p=0.09
Discipline Distribution	
<b>Top 3 Disciplines</b> <b>QHRSS:</b> Physiotherapy 18.8% Pharmacy 16.8% Speech Pathology 15.8%  <b>Non-Scholarship:</b> Occupational Therapy 27.1% Physiotherapy 19.3% Social Work 15.7%	p=<0.001*

\*p is significant at &lt;0.05

Figure 3: Survival Functions



## Discussion of Results:

### *Interpretation of Statistical Findings:*

In order to test the first hypothesis Kaplan-Meier survival analysis utilising a log rank test was used to compare the survival curves of the scholarship holder and non-scholarship holder groups. In order to test the second hypothesis a Mann Whitney U test was used identify significant differences between median observed service times of both groups.

Results from the Kaplan-Meier survival analysis support alternate hypothesis (1) suggesting a significant difference exists between the survival probabilities of both groups, however it is important to look beyond p values when considering survival probabilities and consider survival curves as seen in Figure 3. The above curve in Figure 3 demonstrates a possible protective effect at approximately 24 months for scholarship holders. Clusters of attrition can be seen in the QHRSS group at 24 and 36 months post-commencement in rural practice while less dramatic attrition for non-scholarship holders appears evident at 12 months post commencement in a rural position. Beyond 12 months survival curves for both groups present similarities in attrition points until approximately 60 months at which point the scholarship holder survival curve begins to level as a result of reduced attrition. The larger sample size in the non-scholarship holder group also accounts for a larger number of exit points beyond 60 months suggesting that the differences in the survival curves identified in this study may relate to sample size and may not accurately reflect survival of these longer term employee cohorts. Earlier points on the survival curve suggest a survival advantage until approximately 12 months for scholarship holders however beyond 60 months differences in population size reduce the possibility of identifying a true effect. From approximately 24 months to 60 months both survival curves (scholarship holders and non-scholarship holders) appear to follow similar patterns suggesting that sample size and protective factors influence survival probabilities.

Results from median rural service time using a Mann Whitney U test for non-parametric data support null hypothesis (2) suggesting no significant difference exists between the observed

rural service times of both groups. Analysing data in this respect removes the need for calculated estimates and compares only the available observations. This finding represents the actual service times of both populations in the period of the study (2003 – 2010) without adjusting for different entry points into the data set.

The findings identify that no statistically significant differences were observed between the scholarship holder population and a sample of non-scholarship holders early career professionals who entered rural practice in the same period (June 2003 – Oct 2010). However, survival analysis demonstrated that the pattern of attrition appears different between the groups, with scholarship holders experiencing reduced attrition rates from rural practice in the first 12 to 24 months (and to a lesser degree 36 months) following commencement of rural practice, with a subsequent rapid escalation in attrition. Non-scholarship holders, by comparison have a more even rate of attrition from rural and remote practice settings. One of the impacts of this pattern is that the scholarship holder group, commencing in rural practice at the same time and with large annual attrition events at 12, 24 and 36 months appear to experience a cohort effect to recruitment and attrition not present in the non-scholarship holder group. This may have implications for future Queensland Health workforce planning strategies.

## Factors Impacting Interpretation of Findings

The interpretation of any data should consider other factors that may impact the results. In this case several factors have been identified as possible sources of bias or error.

### ***Fixed term contracts:***

The data demonstrated a high rate of attrition in the non-scholarship holder group at approximately 12 months, however the process employed in data acquisition did not allow for the removal of non-scholarship holders who entered a rural setting on a fixed term contract greater than a four month period (eg: maternity leave cover). It is not possible to determine the exact impact this sub population may have had on attrition however Queensland Health have advised that this population is not inconsiderable suggesting that it may account for the attrition event at approximately 12 months as well as higher attrition rates observed from 4 to 12 months. Attrition resulting from the conclusion of a fixed term contract cannot be compared with a volitional decision to leave rural practice. This sub population likely result in an underestimation of non-scholarship holder retention in rural practice however the magnitude of this underestimation cannot be determined from the current available data.

***Previous practice experience:***

The non-scholarship holder data included employees commencing a rural position at HP3PR, HP3.1, HP3.2 and HP3.3 (and PO equivalent levels) resulting in the inclusion of employees with greater than one year professional practice experience prior to entering the rural position. The data capture of new plus recent graduates was necessary to ensure adequate size of the non-scholarship holder group for the analysis. This approach introduces a potential bias as the literature suggests that new graduates are more likely to positively view elements of rural practice such as large and varied caseload, whereas practitioners with more experience increasingly view this as limiting potential to specialise and progress professionally.<sup>1</sup> Through including professionals with up to three years professional experience at commencement in the rural practice, the non-scholarship holder cohort may have a bias towards shorter retention as these impacts occur earlier in their rural service time. However given the nature of the available data it is not possible to quantify this impact.

***Discipline distribution:***

Data analysis identified a significant difference in the distribution of disciplines between the scholarship holder group and the non-scholarship holder group ( $p < 0.001$ ). Physiotherapy accounted for 18.8% of scholarship holders (greater than any other discipline for scholarship holders) while Occupational therapy accounted for 27.1% of the non-scholarship holders (greater than any other discipline for non-scholarship holders). Differences in proportions of disciplines were evident across a number of disciplines particularly Radiography and Pharmacy that showed significantly less representation in the non-scholarship group compared to the scholarship group (Radiography scholarship holders 8.9% and non-scholarship holders 2.4%; Pharmacy scholarship holders 16.8% and non-scholarship holders 5.4%). Although sample sizes within sub populations prevent survival calculations for each discipline it is possible that over representation of some disciplines and under representation of others between the sample groups may impact retention and attrition to some degree.

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<sup>1</sup> O'Toole K, Schoo A, Hernan A. Why did they leave and what can they tell us? Allied health professionals leaving rural settings. Australian Health Review. 2010;34:66-72.



***Survival Probability:***

As discussed, survival probabilities are calculated at each event (exiting rural practice). Available data showed observable differences in the number of events of the two populations (non-scholarship 97 events; scholarship group 36 events), with 75% of these events occurring prior to median survival time. This large difference in events between the populations may have resulted in a misrepresentation of true survival times. This also resulted in fewer exit points post 60 months particularly within the scholarship holder groups that can be observed in the levelling of the survival curve (Figure 3). Current available data appears to favour increased survival probability for scholarship holders however matching sample sizes may result in less observable differences in the number of events between the populations which may also lead to increased confidence of survival probabilities.

***Attributing Cause:***

The methodology used in this study precludes the attribution of causation for observed differences in survival to an intervention effect of the scholarship program. That is, it is not possible to identify whether any observed differences occurred due to the scholarship holder group's participation in the QHRSS-AH. Results should be interpreted carefully as a consequence. Selection bias cannot be excluded as a potential cause of differences between the two groups. Selection bias refers to the existence of inherent differences between the study groups other than the intervention (in this case undertaking the QHRSS-AH), leading to uncertainty in whether the intervention or other unknown differences resulted in observed differences between groups. It has not been possible with the methodology used in this study to confidently exclude selection bias as a possible causal factor. The scholarship holder group displayed the commitment to rural practice adequate to apply for and win through selection a QHRSS scholarship. The non-scholarship holder group potentially comprises those who applied for QHRSS that were not selected and those who did not apply for a scholarship during their training program. The qualitative component of the Scholarship Review provided evidence of the rural career motivation of the scholarship holder group pre-dating entry to the scholarship program and therefore being present in the absence of an intervention effect of the scholarship program itself. As the current data capacity to establish scholarship intent (applied for scholarship but did not receive) is beyond reach, this inability to establish intent may have significant influence on interpreting survival outcomes.

Within these results it is unclear if motivation or service intent influences rural service tenure however it can be seen that regardless of scholarship status observed rural service times show no significant differences. Survival probabilities although demonstrating significant differences are impacted by a number of variables unable to be accounted for within the available data but do demonstrate observable differences in attrition patterns between the two populations. Further research, in particular longitudinal studies identifying service intent and motivation in order to track and gather rural service time data is required to identify true rural service survival probabilities.

**Key Findings and Conclusions:**

1. The scholarship holder group were found to experience a modest survival advantage compared to the non-scholarship holder comparison group, largely through reduced attrition in the first two years of practice. This finding should be interpreted carefully in light of unquantifiable bias resulting in a likely underestimation of the non-scholarship holder group's retention, especially in the first 12 months following commencement in rural practice.
2. In the observed period from July 2003 – October 2010 there was no statistically significant difference in median service time between the scholarship holder and non-scholarship holder group.
3. The interpretation of the median service time and median survival time findings is that although both groups were observed in the study period to experience similar periods of service in rural or remote areas, the pattern of attrition between the two groups varies. Non-scholarship holder early career professionals entering rural or remote practice settings have a relatively even attrition rate, whereas scholarship holder experience less attrition in the first 2-3 years following commencement with a subsequent rapid acceleration in attrition.
4. The methodology of the study does not allow a clear attribution of causation for differences between the scholarship holder and non-scholarship holder group to an intervention effect of the QHRSS-AH program. In particular selection bias cannot be discounted as a potential impactor. Further longitudinal studies would be required to clearly articulate the cause of any observed differences.

## Appendix 1.

**Kaplan-Meier Survival Table**

Scholarship holder or non-scholarship holder		Time	Status	Cumulative Proportion Surviving at the Time		N of Cumulative Events	N of Remaining Cases
				Estimate	Std. Error		
Non-Scholarship holder	1	4.008	Exit	.994	.006	1	164
	2	4.468	Exit	.988	.009	2	163
	3	4.895	Exit	.982	.010	3	162
	4	4.928	Exit	.	.	4	161
	5	4.928	Exit	.970	.013	5	160
	6	4.961	Exit	.	.	6	159
	7	4.961	Exit	.958	.016	7	158
	8	4.994	Current	.	.	7	157
	9	5.027	Current	.	.	7	156
	10	5.914	Exit	.951	.017	8	155
	11	5.979	Exit	.	.	9	154
	12	5.979	Exit	.	.	10	153
	13	5.979	Exit	.	.	11	152
	14	5.979	Exit	.927	.020	12	151
	15	5.979	Current	.	.	12	150
	16	5.979	Current	.	.	12	149
	17	6.045	Exit	.921	.021	13	148
	18	6.899	Exit	.914	.022	14	147
	19	6.965	Exit	.908	.023	15	146
	20	6.965	Current	.	.	15	145
	21	6.998	Exit	.	.	16	144
	22	6.998	Exit	.896	.024	17	143
	23	7.918	Exit	.	.	18	142
	24	7.918	Exit	.	.	19	141
	25	7.918	Exit	.877	.026	20	140
	26	7.951	Exit	.	.	21	139
	27	7.951	Exit	.864	.027	22	138
	28	7.984	Exit	.858	.027	23	137
	29	7.984	Current	.	.	23	136
	30	7.984	Current	.	.	23	135
	31	8.476	Exit	.852	.028	24	134
	32	8.903	Current	.	.	24	133
	33	8.936	Exit	.845	.028	25	132
	34	8.969	Exit	.	.	26	131
	35	8.969	Exit	.	.	27	130
	36	8.969	Exit	.826	.030	28	129
	37	8.969	Current	.	.	28	128
	38	9.002	Exit	.820	.030	29	127
	39	9.922	Exit	.	.	30	126
	40	9.922	Exit	.	.	31	125
	41	9.922	Exit	.800	.032	32	124
	42	9.922	Current	.	.	32	123
	43	9.922	Current	.	.	32	122
	44	9.922	Current	.	.	32	121
	45	9.988	Exit	.794	.032	33	120
	46	10.940	Exit	.787	.032	34	119
	47	10.940	Current	.	.	34	118
	48	11.006	Exit	.780	.033	35	117
	49	11.926	Exit	.774	.033	36	116
	50	11.926	Current	.	.	36	115
	51	11.926	Current	.	.	36	114
	52	11.959	Exit	.	.	37	113

Scholarship holder or non-scholarship holder	Time	Status	Cumulative Proportion Surviving at the Time		N of Cumulative Events	N of Remaining Cases	
			Estimate	Std. Error			
Non-Scholarship holder	53	11.959	Exit	.	.	38	112
	54	11.959	Exit	.753	.034	39	111
	55	12.452	Current	.	.	39	110
	56	12.912	Exit	.747	.035	40	109
	57	12.945	Exit	.	.	41	108
	58	12.945	Exit	.	.	42	107
	59	12.945	Exit	.726	.036	43	106
	60	12.977	Exit	.	.	44	105
	61	12.977	Exit	.712	.036	45	104
	62	12.977	Current	.	.	45	103
	63	13.897	Exit	.	.	46	102
	64	13.897	Exit	.698	.037	47	101
	65	13.930	Exit	.692	.037	48	100
	66	13.963	Exit	.	.	49	99
	67	13.963	Exit	.	.	50	98
	68	13.963	Exit	.671	.038	51	97
	69	13.996	Exit	.	.	52	96
	70	13.996	Exit	.657	.038	53	95
	71	14.949	Exit	.650	.039	54	94
	72	14.949	Current	.	.	54	93
	73	15.967	Exit	.	.	55	92
	74	15.967	Exit	.636	.039	56	91
	75	15.967	Current	.	.	56	90
	76	16.000	Exit	.629	.039	57	89
	77	16.953	Exit	.	.	58	88
	78	16.953	Exit	.615	.040	59	87
	79	16.953	Current	.	.	59	86
	80	17.018	Exit	.608	.040	60	85
	81	17.873	Exit	.601	.040	61	84
	82	17.906	Exit	.593	.040	62	83
	83	17.971	Current	.	.	62	82
	84	19.910	Exit	.586	.040	63	81
	85	19.910	Current	.	.	63	80
	86	19.975	Exit	.579	.040	64	79
	87	19.975	Current	.	.	64	78
	88	20.895	Current	.	.	64	77
	89	20.895	Current	.	.	64	76
	90	20.895	Current	.	.	64	75
	91	20.895	Current	.	.	64	74
	92	20.928	Exit	.571	.041	65	73
	93	20.961	Exit	.563	.041	66	72
	94	21.487	Exit	.555	.041	67	71
	95	21.914	Current	.	.	67	70
	96	21.914	Current	.	.	67	69
	97	21.914	Current	.	.	67	68
	98	21.914	Current	.	.	67	67
	99	21.914	Current	.	.	67	66
	100	21.914	Current	.	.	67	65
	101	21.914	Current	.	.	67	64
	102	21.950	Current	.	.	67	63
	103	22.932	Current	.	.	67	62
	104	23.918	Current	.	.	67	61

Scholarship holder or non-scholarship holder	Time	Status	Cumulative Proportion Surviving at the Time		N of Cumulative Events	N of Remaining Cases	
			Estimate	Std. Error			
Non-Scholarship holder	105	23.984	Exit	.	.	68	60
	106	23.984	Exit	.537	.042	69	59
	107	24.016	Exit	.528	.042	70	58
	108	24.871	Exit	.519	.042	71	57
	109	25.922	Current	.	.	71	56
	110	26.382	Exit	.510	.042	72	55
	111	26.448	Current	.	.	72	54
	112	26.908	Exit	.500	.043	73	53
	113	26.940	Current	.	.	73	52
	114	27.893	Exit	.491	.043	74	51
	115	28.912	Exit	.481	.043	75	50
	116	28.945	Current	.	.	75	49
	117	29.963	Current	.	.	75	48
	118	29.963	Current	.	.	75	47
	119	30.982	Exit	.471	.043	76	46
	120	31.967	Exit	.	.	77	45
	121	31.967	Exit	.450	.044	78	44
	122	32.920	Current	.	.	78	43
	123	33.906	Exit	.440	.044	79	42
	124	33.938	Current	.	.	79	41
	125	33.938	Current	.	.	79	40
	126	33.938	Current	.	.	79	39
	127	33.940	Exit	.429	.044	80	38
	128	33.971	Exit	.417	.045	81	37
	129	34.004	Exit	.406	.045	82	36
	130	34.957	Exit	.395	.045	83	35
	131	35.943	Current	.	.	83	34
	132	36.961	Exit	.383	.045	84	33
	133	36.961	Current	.	.	84	32
	134	37.914	Exit	.	.	85	31
	135	37.914	Exit	.359	.045	86	30
	136	37.947	Exit	.347	.045	87	29
	137	37.947	Current	.	.	87	28
	138	37.979	Exit	.335	.045	88	27
	139	38.932	Exit	.322	.045	89	26
	140	39.000	Exit	.310	.045	90	25
	141	43.959	Exit	.298	.045	91	24
	142	43.992	Exit	.285	.045	92	23
	143	43.992	Current	.	.	92	22
	144	44.912	Current	.	.	92	21
	145	44.912	Current	.	.	92	20
	146	45.963	Exit	.271	.045	93	19
	147	55.951	Current	.	.	93	18
	148	56.936	Exit	.256	.045	94	17
	149	57.922	Current	.	.	94	16
	150	57.955	Exit	.240	.045	95	15
	151	59.926	Current	.	.	95	14
	152	66.920	Current	.	.	95	13
	153	69.914	Current	.	.	95	12
	154	72.936	Exit	.220	.045	96	11
	155	73.922	Current	.	.	96	10
	156	73.922	Current	.	.	96	9

Scholarship holder or non-scholarship holder	Time	Status	Cumulative Proportion Surviving at the Time		N of Cumulative Events	N of Remaining Cases	
			Estimate	Std. Error			
Non-Scholarship holder	157	74.940	Current	.	.	96	8
	158	78.949	Current	.	.	96	7
	159	79.014	Current	.	.	96	6
	160	81.938	Exit	.183	.050	97	5
	161	81.938	Current	.	.	97	4
	162	86.300	Current	.	.	97	3
	163	87.984	Current	.	.	97	2
	164	87.984	Current	.	.	97	1
	165	87.984	Current	.	.	97	0
Scholarship Holder	1	.000	Exit	.	.	1	100
	2	.000	Exit	.	.	2	99
	3	.000	Exit	.	.	3	98
	4	.000	Exit	.	.	4	97
	5	.000	Exit	.	.	5	96
	6	.000	Exit	.941	.024	6	95
	7	1.380	Exit	.931	.025	7	94
	8	2.300	Exit	.921	.027	8	93
	9	4.172	Current	.	.	8	92
	10	6.440	Current	.	.	8	91
	11	6.899	Current	.	.	8	90
	12	7.359	Current	.	.	8	89
	13	7.852	Exit	.910	.028	9	88
	14	8.279	Exit	.900	.030	10	87
	15	8.279	Current	.	.	10	86
	16	8.279	Current	.	.	10	85
	17	8.280	Exit	.890	.031	11	84
	18	8.280	Current	.	.	11	83
	19	8.739	Current	.	.	11	82
	20	8.739	Current	.	.	11	81
	21	8.739	Current	.	.	11	80
	22	8.739	Current	.	.	11	79
	23	8.739	Current	.	.	11	78
	24	8.740	Current	.	.	11	77
	25	9.199	Current	.	.	11	76
	26	10.119	Current	.	.	11	75
	27	11.500	Exit	.	.	12	74
	28	11.500	Exit	.866	.035	13	73
	29	12.419	Current	.	.	13	72
	30	15.639	Current	.	.	13	71
	31	17.938	Current	.	.	13	70
	32	19.778	Current	.	.	13	69
	33	20.271	Current	.	.	13	68
	34	20.730	Current	.	.	13	67
	35	20.731	Current	.	.	13	66
	36	20.731	Current	.	.	13	65
	37	20.731	Current	.	.	13	64
	38	20.731	Current	.	.	13	63
	39	20.731	Current	.	.	13	62
	40	20.731	Current	.	.	13	61
	41	24.000	Exit	.	.	14	60
	42	24.000	Exit	.	.	15	59
	43	24.000	Exit	.	.	16	58

Scholarship holder or non-scholarship holder	Time	Status	Cumulative Proportion Surviving at the Time		N of Cumulative Events	N of Remaining Cases	
			Estimate	Std. Error			
Scholarship Holder	44	24.000	Exit	.	.	17	57
	45	24.000	Exit	.	.	18	56
	46	24.000	Exit	.	.	19	55
	47	24.000	Exit	.	.	20	54
	48	24.000	Exit	.	.	21	53
	49	24.000	Exit	.	.	22	52
	50	24.000	Exit	.724	.050	23	51
	51	24.000	Current	.	.	23	50
	52	24.000	Current	.	.	23	49
	53	24.000	Current	.	.	23	48
	54	24.000	Current	.	.	23	47
	55	24.000	Current	.	.	23	46
	56	24.000	Current	.	.	23	45
	57	24.000	Current	.	.	23	44
	58	24.000	Current	.	.	23	43
	59	24.000	Current	.	.	23	42
	60	24.380	Exit	.707	.052	24	41
	61	24.411	Current	.	.	24	40
	62	25.840	Exit	.689	.054	25	39
	63	26.250	Current	.	.	25	38
	64	28.560	Exit	.671	.055	26	37
	65	29.930	Current	.	.	26	36
	66	30.400	Current	.	.	26	35
	67	30.440	Exit	.652	.057	27	34
	68	30.840	Exit	.632	.058	28	33
	69	30.900	Exit	.613	.060	29	32
	70	31.320	Exit	.594	.061	30	31
	71	31.360	Exit	.575	.062	31	30
	72	32.690	Current	.	.	31	29
	73	32.690	Current	.	.	31	28
	74	32.690	Current	.	.	31	27
	75	32.690	Current	.	.	31	26
	76	32.690	Current	.	.	31	25
	77	32.690	Current	.	.	31	24
	78	32.690	Current	.	.	31	23
	79	32.740	Current	.	.	31	22
	80	34.990	Current	.	.	31	21
	81	35.450	Current	.	.	31	20
	82	35.910	Current	.	.	31	19
	83	35.960	Exit	.545	.065	32	18
	84	36.000	Exit	.514	.068	33	17
	85	37.290	Current	.	.	33	16
	86	42.400	Exit	.482	.071	34	15
	87	42.400	Current	.	.	34	14
	88	44.650	Current	.	.	34	13
	89	44.650	Current	.	.	34	12
	90	45.110	Current	.	.	34	11
	91	48.840	Current	.	.	34	10
	92	53.820	Exit	.434	.079	35	9
	93	55.690	Current	.	.	35	8
	94	63.510	Current	.	.	35	7
	95	63.970	Exit	.372	.089	36	6

Scholarship holder or non-scholarship holder	Time	Status	Cumulative Proportion Surviving at the Time		N of Cumulative Events	N of Remaining Cases
			Estimate	Std. Error		
Scholarship Holder 96	67.650	Current	.	.	36	5
97	68.570	Current	.	.	36	4
98	69.030	Current	.	.	36	3
99	80.530	Current	.	.	36	2
100	81.300	Current	.	.	36	1
101	96.000	Current	.	.	36	0