



Thank you for the opportunity to speak to you about Australia's experience with job seeker profiling.

Australia began using profiling tools in the mid 1990s and has continually developed and refined the instruments as required by the considerable changes to the delivery of employment assistance in that time. The profiling tool has played an important role in the early intervention strategy which has remained a central part of the delivery of employment assistance throughout the last decade.

[Rationale for Profiling]

- Avoid the on-going costs of long term unemployment
- ration the most expensive forms of assistance to the most disadvantaged job seekers
- minimise deadweight costs

So what has been the rationale for the use of a profiling tool as part of Australia's early intervention strategy.

The main aim of an early intervention strategy is to prevent job seekers from becoming long-term unemployed - to intervene before the barriers to employment caused by extended unemployment (eg. loss of skills, motivation and confidence or employer stigmatisation) become entrenched.

Profiling also provides a means of rationing assistance to the most disadvantaged job seekers who are most in need and likely to benefit.

This in turn provides the opportunity to minimise deadweight costs.

[What is the JSCI?]

- A statistical tool which predicts the chance of becoming long term unemployed
- A 'score' is derived based on a weighted set of characteristics

So what is the JSCI?

The JSCI is a statistical tool that predicts the chance of becoming long term unemployed.

It does this by using a set of job seeker characteristics that are known to affect the chance of becoming long term unemployed. A weight is assigned for each possible value of a particular characteristic, eg educational qualifications would have a different weight for those with post school qualifications, vocational qualifications and different years attended at school depending on their affect on the chances of reaching long term unemployment.

The weights for each characteristic are added together to give a score for any particular job seeker which is a measure of their chance of becoming long term unemployed.

[Development of the JSCI]

- Formal research
- Expert judgment
- Major stakeholders, peak welfare organisations and the employment services industry were also consulted

As I have said the JSCI has seen some changes over the years as it has been redeveloped and refined to make it more accurate, a process that will continue given that it is not a perfect instrument.

Changes to employment assistance arrangements in the mid 1990s saw the development of the Job Seeker Instrument with 7 factors. This instrument was used to stream job seekers to appropriate types of assistance with different levels of funding.

The current profiling tool, the Job Seeker Classification Instrument (JSCI), was based on the original instrument but with a larger number of factors, 18 in fact, identified as important in determining the chances of becoming long term unemployed. The JSCI was developed as part of the major reforms to employment assistance arrangements with the introduction of the Job Network in 1998.

With the introduction of the Active Participation Model in July 2003 the JSCI has been re-developed and its application modified. I will talk about its current operation in a moment.

The development of the JSCI involved several key elements.

An extensive survey of job seekers was conducted in 1997 to identify the factors associated with prolonged unemployment and the relative importance of these factors so that weights could be determined.

A working group of 'experts' made recommendations on additional factors such as homelessness and ex-offender status which could not be tested in a survey. The low numbers with these characteristics did not allow reliable estimation from the survey. The experts also moderated other factors where it was felt that more weight for particular characteristics was required. The mature age, Indigenous job seekers etc were considered to be particularly disadvantaged and that the analysis may not have measured this disadvantage accurately. Moderation of the weights is still conducted but only affects a few characteristics.

Major stakeholders, peak welfare organisations and the employment services industry were also consulted. This was a very important element of the development of the profiling instrument as these groups represent those who apply the instrument and those assessed by it.

In Australia we have found that acceptance of the instrument by these groups is essential to ensure that the instrument is administered accurately and valued as an assessment tool.

[Operation of the JSCI]

- Centrelink applies the JSCI at registration
- Job seekers assessed as 'at risk' have immediate access to more intensive assistance
- Other job seekers have access to basic job placement services
- After 12 months unemployment access to more intensive assistance

The current operation of the JSCI while similar to that in the past has been changed somewhat as a result of the introduction of the Active Participation Model.

To address some of the concerns with the Job Network identified in Departmental and other independent evaluations the *Active Participation Model* was introduced in July 2003 for the delivery of employment services through the Job Network. These concerns were mainly about the provision of assistance to the long term unemployed.

Unlike the previous employment assistance arrangements access to more intensive assistance is now not only based on an early intervention strategy using the JSCI but on duration of unemployment. In the past, duration of unemployment was a factor that contributed to the JSCI score but did not necessarily guarantee access to more intensive assistance for those who were unemployed for 12 months or more.

Centrelink, the Public Employment Service in Australia, applies the JSCI at registration and refers job seekers to their preferred Job Network member. The assessment is done using a face to face interview with a structured questionnaire using 30 questions. Centrelink staff are trained to ensure that this is done on a consistent basis.

Job seekers assessed at registration as 'at risk' of becoming long term unemployed have immediate access to more intensive assistance is also available. Other job seekers have access to basic job placement services and job search training. After 12 months unemployment access to more intensive assistance is available.

So there has been a change in the role of the JSCI in that it is now used exclusively as an early intervention tool.

JSCI Supplementary Assessment (JSA)

There are four types of JSA:

- Disability
- Personal Factors
- Special Needs
- the further JSA

There is another element to the assessment process. For those job seekers who may have special requirements there is also the JSCI Supplementary Assessment, the JSA. There are four types.

JSA – Disability A Centrelink Specialist Officer determines the most appropriate employment assistance for those with a disability.

JSA – Personal Factors is conducted to clarify the JSCI score and when appropriate assign additional JSCI points to reflect the disadvantage of the job seeker. This provides discretion for Centrelink staff to adjust the JSCI. This does, of course, cause some concern but is carefully monitored to ensure that consistency is maintained throughout the various Centrelink Offices. The Personal Characteristics factor has the following weights, low impact 4 points, medium 9, high 12. This shows that Centrelink can have a significant impact on the JSCI score if they deem this to be necessary.

JSA – Special Needs is by a conducted by a Centrelink specialist officer when a job seeker has disclosed multiple personal and/or vocational barriers to employment. The assessment determines whether the job seeker has the capacity to benefit from Job Network or whether they would be better assisted through the Personal Support Program. This is a programme that deals with drug addiction and other more serious barriers to employment that the Job Network is not equipped to deal with.

The *Further JSA* provides for a more complex three hour assessment conducted by a Centrelink Psychologist or Social Worker. It is conducted in a small number of cases when the Centrelink officer is unable to make a decision during the initial JSA- Special Needs interview.

The JSA is conducted in about 13% of cases, not all result in referral to programmes other than Job Network.

It is also possible for Job Network members to update the JSCI. This is also carefully monitored to ensure that Job Network members do not abuse this option. It is really only an issue in the first 12 months on income support as they can increase the flow into more intensive assistance and consequently increase their funding.

[JSCI Factors]

- Age and Gender
- Language and Literacy
- Disability/Medical Condition
- Recency of Work Experience
- Stability of Residence
- Educational Attainment
- Disclosed Ex-offender
- Personal Characteristics Requiring Professional or Specialist Judgement
- Indigenous/Aust. Born South Sea Islander Status
- Country of Birth
- Geographic Location
- Vocational Qualifications
- Family Status/Living Arrangements
- Contactability

What are the factors used in the JSCI? These factors have a significant impact on job seeker employment prospects and hence their chance of becoming long term unemployed.

The weights for each of the factors are now derived from the analysis of exit from benefit outcomes rather than from surveys. The department has much better income support data now than in the past and this provides a very good proxy indicator for employment outcomes.

The revision of the JSCI as part of the introduction of the *Active Participation Model* included the removal of four of the factors under the original JSCI. Unemployment duration has been omitted as this factor now determines access to assistance for those who remain unemployed for 12 months or more.

Statistical analysis showed that the 'access to transport' factor did not significantly assist the identification of the most disadvantaged job seekers. The 'proximity to labour market' factor is now accounted for under the geographic factor, and the 'small community' factor has been replaced by the geographic factor with an increased range of points for Indigenous job seekers.

[JSCI Weights]

Age and Gender	Points	Age and Gender	Points
Male		Females	
15-19	0	15-19	4
20-24	0	20-24	0
25-29	1	25-29	1
30-34	2	30-34	3
35-39	3	35-39	4
40-44	4	40-44	6
45-49	5	45-49	6
50-54	8	50-54	7
55+	8	55+	7

There are too many factors and values for each factor to show them all. I have the complete set of factors and weights and these are included in the paper which will be made available.

The weights for age and gender as shown are used in the JSCI as interaction terms because the logistic regression model shows that these are significant.

How do we get to the weights? These are derived from the logistic regression model. The dependent variable is the exit rate from unemployment benefits which has been found to be a very good proxy for the chance of becoming long term unemployed. The independent variables are the individual characteristics from the 14 factors included in the JSCI. The regression provides an estimate of the coefficients for each characteristic.

[Derivation of weights]

- $\ln(p/(1-p)) = \beta X + \text{error}$
- $\beta X = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_n X_n$
- Weights are β_1 to β_n multiplied by f and rounded to nearest integer, B_1 to B_n
- JSCI score = $B_1 X_1 + \dots + B_n X_n$
- For any JSCI score we can calculate the probability of exit using
- $p = e^{\beta + (\text{JSCI})/f} / (1 + e^{\beta + (\text{JSCI})/f})$

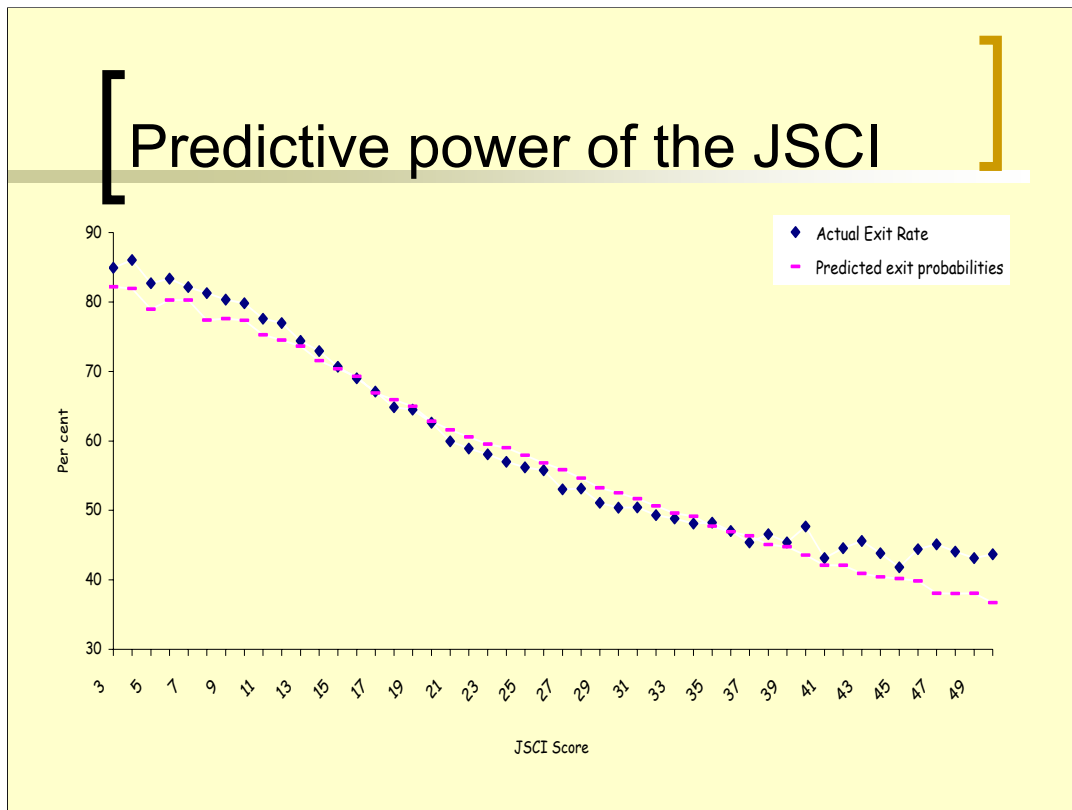
The logistic regression model is the exit rate, p , is dependent on the range of characteristics X_1 to X_n . This can be expressed in the following way.

The logistic regression uses the log of the odds ratio, $p/(1-p)$, is equal to βX plus an error term. βX is the intercept, β_0 , plus all the coefficients from the regression for each characteristic X . X has the value of 0 or 1.

To get the weight for each characteristic the coefficient from the logistic regression is multiplied by a constant f , we have used 10 in the past, and then rounded to the nearest integer, a very simple conversion. The reason we use 10 is that it gives weights between 0 and 10. This is based on the assumption that the size of the coefficient reflects the relative contribution of the particular characteristic to the chances of becoming long term unemployed.

The JSCI score for any job seeker is simply the sum of weights for each characteristic for that job seeker.

We can also calculate the probability of exit for each JSCI score. β is the intercept β_0 .



It is possible to use the coefficients from the regression model to predict the exit rate for particular JSCI scores.

This slide shows the actual exit rate from benefits, dark dots, and that predicted by the JSCI, pink dashes. Apart from some variation for very low and very high scores the JSCI appears to be a very good predictor of the chance of exiting benefits. This is particularly true around the thresholds for more intensive assistance, usually between the low 20s and mid 30s.

The diagnostic statistics for the logistic regression model, however, indicate only moderate predictive power.

One point to consider is that logistic regressions performed on cross-sectional unit-record data usually have low predictive power according to diagnostic tests.

It should also be remembered that other factors such as job seeker motivation, presentation and employer attitudes are not included in the model. Nevertheless, we consider the predictive power of the model is very good as shown in the graph and certainly good enough for the purpose that the JSCI is used, to refer those over the threshold score to intensive assistance.

[Effectiveness of the JSCI]

The effectiveness of any profiling instrument will depend on

- the accuracy of the information recorded in the administrative system relating to job seekers' characteristics and circumstances that are used to construct the factors; and
- the predictive power of the factors that make up the instrument

We have already seen that the predictive power of the JSCI is very good. We also need to look at the accuracy of the data used to construct the factors to determine the effectiveness of the JSCI.

The department has invested considerable resources in attempts to improve the accuracy of the profiling information collected by Centrelink and the JNM providers. This is because there seems little point in giving the JSCI such a pivotal role in the determination of the type of assistance provided and hence, levels of funding, unless we can have confidence in its accuracy.

[Accuracy of information]

The accuracy of information used will depend on

- the willingness of job seekers to reveal sensitive personal information
- the ability of Centrelink officers and Job Network members to elicit the information
- the accuracy of recording

The accuracy of information used for the JSCI will depend on the willingness of job seekers to reveal sensitive personal information, the ability of Centrelink officers and Job Network members to elicit such information and the accuracy of recording such information.

Measures of the accuracy of the JSCI

There have been many studies aimed at improving the accuracy of the JSCI.

The main areas of concern are:

- literacy and language
- disclosure of personal information
- different collection methods give different results
- the need to continually update temporal factors

Several studies have been conducted which seek to determine the accuracy of the JSCI factors including studies which compared the weights and JSCI scores derived from telephone interviews with those obtained from face to face interviews by Centrelink at registration.

The main findings have included the need to develop better techniques for identifying relative disadvantage in literacy and language. Centrelink staff were found to rate job seekers much more highly on their ability to speak, read and write English than job seekers self-reporting in the telephone interview where they tended to report lower levels of English speaking abilities.

Job seekers were more inclined to disclose sensitive personal information in the telephone interview than in the Centrelink interview, especially on disabilities/ medical conditions/criminal convictions (over 6% in the telephone interview but only 2% in the face to face interview)/ higher levels of the lowest educational qualification, completed primary school.

the need to continually update temporal factors such as recency of work, homelessness, etc. because changes to job seeker circumstances can have a significant effect on the JSCI score.

Departmental research suggests that job seekers are less likely to reveal sensitive information in the Centrelink interview than in telephone interviews because they are concerned about the potential ramifications on their eligibility for income support (a function performed by Centrelink) and employment prospects. The telephone methodology assured job seekers that any information revealed would not be made available to Centrelink or Job Network members in an attempt to encourage job seekers to reveal more information. In practice this would not be possible and the advantage of the telephone interview may be lost to some extent. It is clear, however, that collecting personal information is sometimes difficult if it is not possible to maintain anonymity. Centrelink staff or Job Network providers must be encouraged to be diligent when applying or updating the JSCI and careful to gain the job seeker's confidence so that all details relating to disadvantage are revealed.

[JSCI interview]

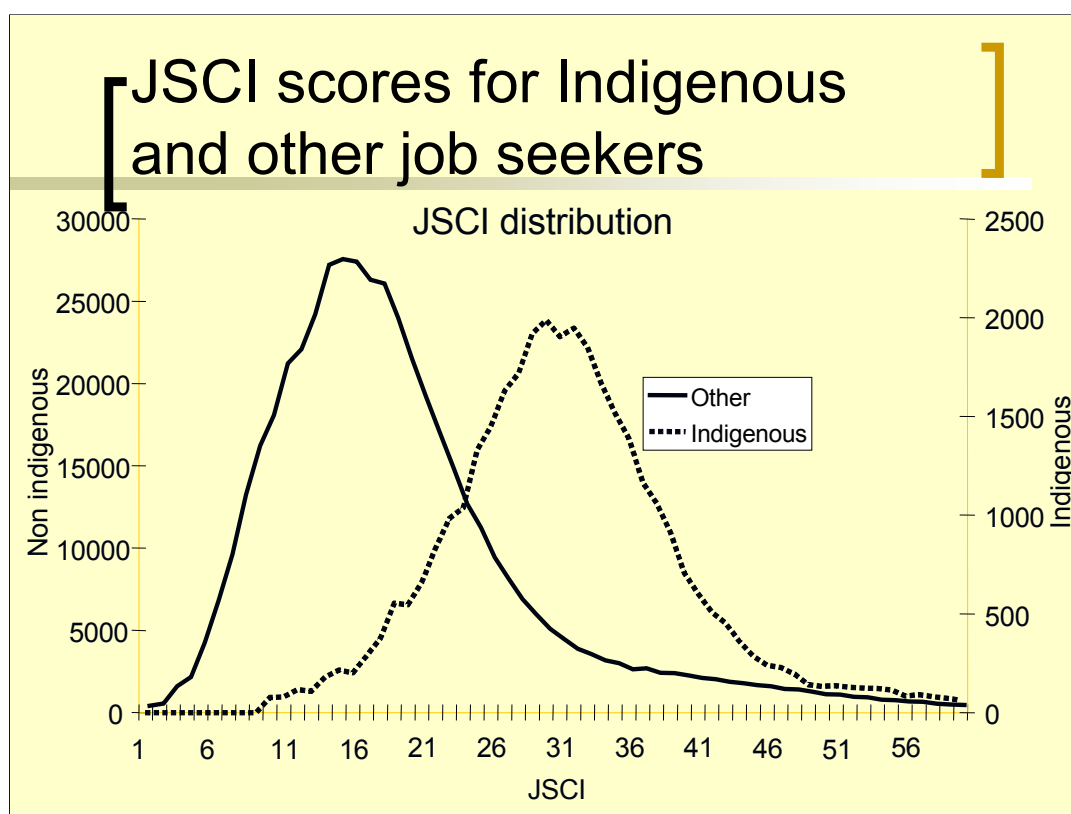
The Centrelink JSCI interview is an important factor in gaining accurate information which requires

- Consistent approach across all areas and over time
 - A need for rigorous quality control
- Centrelink's application of the JSCI was found to be 90.3% accurate in 2004 compared with 82.6% in 2002

The conduct of the interview by Centrelink staff also has a bearing on the accuracy of the information collected for the JSCI. Research has shown that implementing a consistent verbatim approach, through training, to the administration of the JSCI by Centrelink is critical to achieve increased consistency and accuracy in collection of job seeker data.

As a result of recent research the JSCI questionnaire was reduced from 60 questions to 30 questions, and the flow of the questions improved. The revised JSCI questions and supporting IT were also tested extensively in usability laboratory trials.

Studies are conducted every year or so to test the quality of the Centrelink interview. This is done by following up those who have recently completed a Centrelink interview and applying the JSCI again. A study conducted in May 2004 found the Centrelink JSCI interview to be 90% accurate in identifying the appropriate funding level. This represents a significant improvement over the 82.6% accuracy found when a similar exercise was conducted in 2002 prior to the latest changes to the Centrelink interview.



One question that can be asked to determine the effectiveness of the JSCI is how does it compare with other alternatives such as the ‘no profiling’ option or targeting particular client groups.

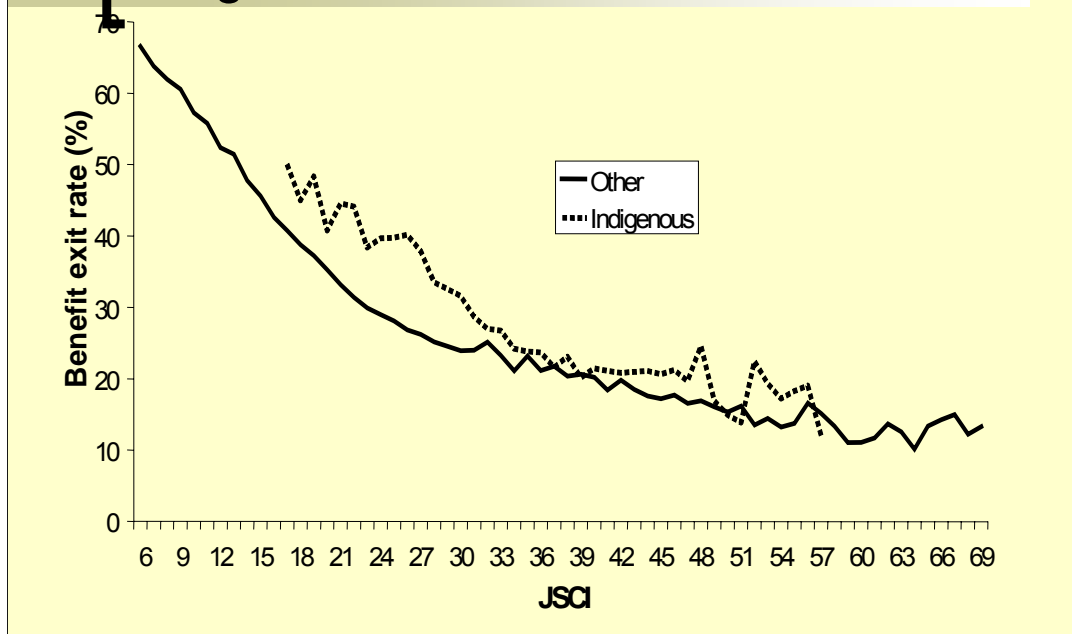
If we think that the JSCI is a reasonable predictor of the chance of becoming long term unemployed and our interventions are effective then targeting using the JSCI would be preferred over no profiling.

In a sense, the ‘no profiling’ option is the lazy approach which makes no attempt to use the extensive information available on job seeker characteristics which are known to have an effect on employment prospects. From Australia’s point of view we would argue that the no profiling approach fails to address the objective of targeting more expensive assistance to the most disadvantaged and could lead to higher levels of long term unemployment because of the failure to intervene early in the unemployment spell. We also have confidence that the JSCI can do its job.

It is also possible to simply target assistance to particular groups of job seekers. This approach, however, assumes that all those in a particular group have similar levels of disadvantage. We know this is not the case as members of a particular group will have very different characteristics and situations such as work history, educational qualifications, skill levels, family and living arrangements etc, that will impact on their chances of finding employment..

The advantage of the JSCI over the target group approach can be seen in this slide which shows the distribution of JSCI scores for Indigenous job seekers and other job seekers. The higher levels of disadvantage amongst Indigenous job seekers is reflected in the much larger numbers with higher JSCI scores compared to other job seekers. It is also apparent, however, that many Indigenous job seekers have lower levels of disadvantage and are not likely to reach long term unemployment and so would not require more intensive assistance.

Benefit exit rate by JSCI score for Indigenous and other seekers

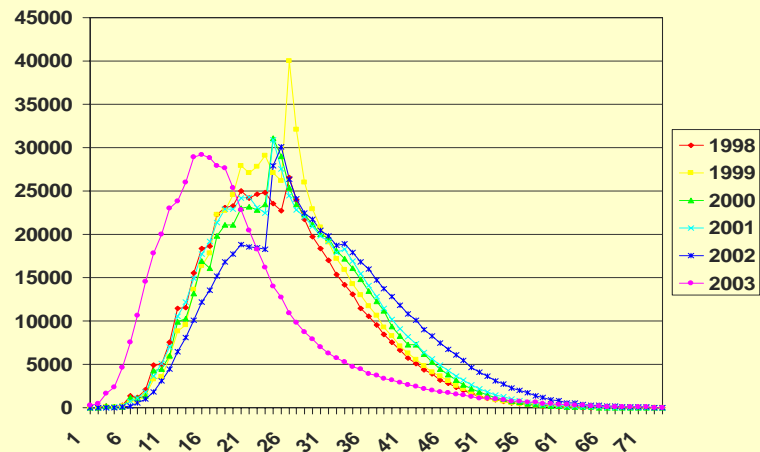


It is also possible to obtain a measure of the predictive power of the JSCI by comparing benefit exit rates by the JSCI score for different types for job seekers. This slide shows the exit rates for both Indigenous and other job seekers by JSCI score.

It can be seen that the exit rate of Indigenous job seekers is similar to that of other job seekers with the same JSCI score suggesting that the JSCI is achieving its objective of identifying those 'at risk' in disadvantaged client groups.

Indigenous job seekers slightly higher exit rate compared to other job seekers for particular JSCI scores is likely to be due to the moderation of weights by the 'expert panel'.

[Implementation issues]



A key issue in relation to the accuracy of the instrument is the ability of Centrelink staff and Job Network members to update the JSCI and the consequent effect of this on streaming job seekers to appropriate forms of assistance. Internal research by the department into the application of the JSCI using both the Centrelink face to face interview and a telephone interview found that Centrelink staff had a tendency to 'push' job seekers over the threshold for more intensive forms of assistance. It was not always clear how this was done but it was obvious that the accuracy of profiling information was compromised to some extent. This tendency was an issue when profiling instruments were introduced in the mid 1990s and was also reported in the Job Network evaluations.

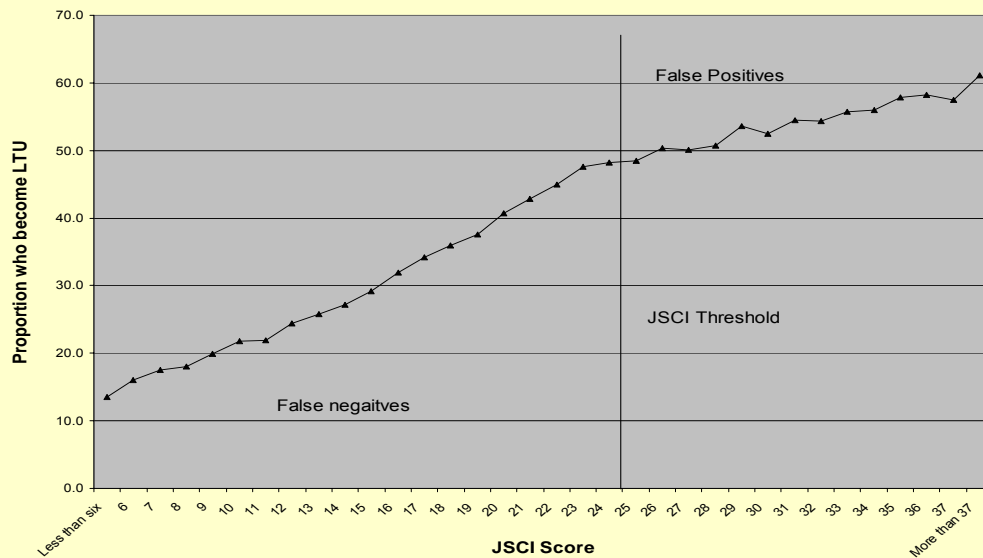
This slide shows the distribution of JSCI scores for each of the last 5 years. It can be seen that in all years up to 2003 a spike in the distribution occurs at the threshold score for entry to Intensive Assistance. This was not observed for the trial using telephone interviews to collect JSCI information because telephone interviewers simply asked the JSCI questions without any knowledge of the points score system. The distribution of JSCI scores in 2003, however, does not have a spike. This suggests that the incentive for Centrelink staff to increase job seekers JSCI scores has disappeared under the *Active Participation Model*.

[How is the JSCI used]

- Primarily as a means of streaming job seekers to different forms of assistance
- A threshold score is set and those over the score will be considered 'at risk'

Since its inception the JSCI has been used to stream job seekers to various forms of assistance and this is done by setting a threshold score. Those over the threshold being considered at risk and so eligible for more intensive assistance. In the past it has also been used to stream job seekers to different levels of funding. With the introduction of the Active Participation model for delivery of services in July 2003 this is now also based on duration of unemployment.

JSCI score by chance of becoming long term unemployed

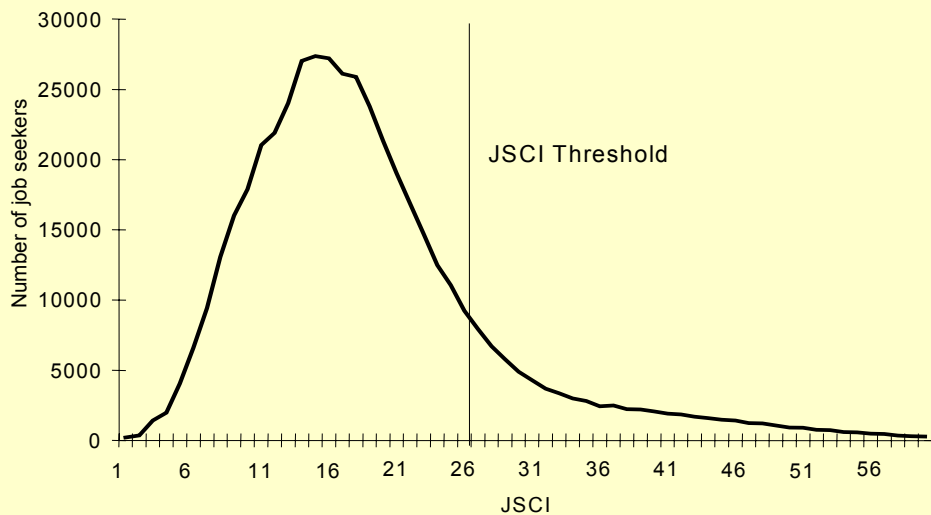


The chart shows, from administrative data, the proportion of job seekers who reach long term unemployment (12 months) for each JSCI score. It can be seen that the proportion who reach long term unemployment increases as the JSCI score increases suggesting that the JSCI score, as shown before, is a good predictor of the chance of becoming long term unemployed.

How do we set the threshold? We need to be flexible to ensure budget requirements are met but we should also consider deadweight issues.

In setting the threshold it needs to be remembered that raising the threshold will reduce the number who are referred to more intensive assistance but should not have been (false positives) but at the same time will increase the number not referred to more intensive assistance who should have been (false negatives). The threshold needs to be set, therefore, to achieve a balance between 'false positives' and 'false negatives'.

[Distribution of JSCI scores]



It can be seen from this slide, which shows the distribution of JSCI scores, that as the threshold score is lowered thus minimising 'false negatives', significant numbers of job seekers will have access to more intensive assistance at a considerably higher cost. Hence, setting the JSCI threshold needs to be balanced by the available resources for more intensive assistance. In Australia, the threshold JSCI score has been changed on several occasions to ensure that sufficient resources are available for the provision of assistance to those most 'at risk'.

[How do we improve the JSCI]

- Job Seeker motivation – can it be measured
- Attitudinal Segmentation model developed
- Job seeker attitudes can be measured and are associated with employment outcomes

One area of concern that affects the predictability of profiling tools is the inability to include all factors that impact on a job seeker employment prospects. At present, the JSCI relies largely on observable information that can be readily collected. One perceived shortcoming has been a lack of information on job seeker motivation to find work. Indications from employers are that job seeker attitudes are likely to have a major influence on their employment prospects (DEWR 2001). In the past it has been difficult to include this type of information because it was difficult to quantify. There is no doubt, however, that case managers will make an assessment of a job seeker's motivation before deciding the most appropriate interventions.

Over the last 3 or 4 years the department has been involved in a project which seeks to measure job seeker attitudes to job search, work and welfare dependency. Job seekers were provided with a series of 21 statements designed to differentiate the level of motivation and openness in relation to job search and asked to rate their level of agreement using a 10 point scale. A segmentation model has been developed that allows the classification of job seekers into 8 segments representing different levels of motivation and openness.

Early findings from this work suggest that job seeker attitudes can be measured and are associated with employment outcomes. These questions could be administered at regular intervals by Job Network members as part of the profiling exercise. The job seeker profile could then include the motivational segment.

[Attitudinal Segmentation]

- Attitudes can have an impact of an extra 6 percentage points after accounting for other factors
- The impact of attitudes is greater for finding a full time job
- Attitudes are more important for job seekers 40 years and over
- Motivation declines rapidly with longer duration of unemployment

These are some of the findings from that work.

Much work will need to be conducted before we can use this work in profiling. Given that motivation can change quickly over time issues such as frequency of application need to be dealt with.

[Other approaches to profiling]

- Predict the expected outcome for a job seeker from a particular intervention based on their profile
- Provide Job Network members with this information for each job seeker in their case load

Australia's experience with profiling tools has primarily been to stream job seekers to different forms of assistance or different levels of funding for intensive assistance. This has been relatively successful at rationing more intensive assistance to the most disadvantaged job seekers. The challenge now is to make better use of the extensive profiling and performance information collected about job seekers to better inform Job Network providers about the most cost effective interventions for job seekers in their case loads.

This could be done as follows. Participation in any one of the different types of interventions available for any job seeker would have an expected outcome. Expected outcomes from any intervention could be estimated for any individual. Hence, for any individual job seeker, a range of interventions with an associated expected outcome could be made available to providers.

These types of approaches have been developed in the USA and Canada (Eberts & O'Leary 2002, Eberts & O'Leary 2003). Switzerland is also developing such a system (Frolich et al 2003).

Net Impact results

Table 1 Net impact by job seeker characteristics¹

	Referral effect ²		Programme effect ³	
	IA	JST	IA	JST
<i>Age</i>				
15-24	-5.7	8.0	-4.0	3.6
25-44	4.8	11.9	5.1	9.4
45+	8.2	12.1	11.8	12.4
<i>Gender</i>				
Female	5.6	7.5	7.0	9.3
Male	3.5	12.4	5.5	7.7
<i>Duration on benefits</i>				
0-11 months	1.4	10.9	7.0	8.6
12-23 months	2.3	4.2	na	na
24+ months	7.1	na	6.4	na
<i>Educational attainment</i>				
Less than year 10	3.2	na	5.9	na
Year 10	5.8	13.0	6.8	9.8
Year 11 or 12	2.8	8.4	3.8	7.6
TAFE	3.2	10.2	8.1	5.9
Degree	2.9	11.4	na	9.1

We have been able to show what interventions work best for different job seekers from our net impact studies. This slide shows the employment net impacts for Intensive Assistance and Job Search Training by job seeker characteristics. This provides an indication of job seekers with particular characteristics who benefit most from being required to participate (referral effect) or from actual participation (programme effect) for these services.

It can be seen that not all referrals are well targeted. For example, the net impact results suggest that those aged 15 to 24 years should be referred to Job Search Training early in their unemployment spell because the referral and the programme effects are both strongly positive as opposed to the strongly negative effects for Intensive Assistance. Changes have now been made to the delivery of employment services for those aged 15 to 24 years who are now required to participate in job search training courses immediately upon registration.

While these net impact results are useful for programme and policy development they are of little use to providers who have had limited or no control over which job seekers are referred to particular services.

What we need is information about interventions that will be of use to Job Network members to assist the wide range of job seekers in their caseload.

While information on the effectiveness of Job Search Training and Intensive Assistance is available for job seekers with different characteristics and circumstances, information on the types of interventions has been limited because of the 'black box' nature of Intensive Assistance.

[Predicting outcomes]

- The outcome measure could be paid employment outcomes or cost per paid outcome
- Those factors included in the JSCI plus motivation could make up the job seeker profile
- The range of interventions could include, for example, standard services as well as interventions paid for by the Job Seeker Account.

This lack of information about the types of interventions provided to job seekers in the past has largely been overcome under the *Active Participation Model*. Job Network members now have access to the Job Seeker Account which provides funds for the provision of a range of interventions. The types and cost of the vast majority of these interventions are recorded on the administrative system. This includes assistance such as work equipment, employer incentives, on and off the job training, post placement support etc. Along with profiling information, these data can be used to determine the most cost effective interventions for job seekers with different profiles.

To relate as closely as possible to the key performance indicators for Job Network providers the outcome measure would be paid employment outcomes. The introduction of competitive tendering for the delivery of employment assistance has required better performance measures to be developed for the assessment of individual provider performance. The relative assessment of Job Network member performance, in terms of the proportion of paid employment outcomes, has been provided through the development of the Star Ratings.

It would also be possible to use cost per paid outcome to provide a cost effectiveness outcome measure. Those factors included in the JSCI plus motivation could make up the job seeker profile. The range of interventions could include, for example, standard services as well as interventions paid for by the Job Seeker Account. Individual provider performance could also be included in the model as part of the job seeker profile.

[What has been achieved?]

- Minimised deadweight costs
- Targeted assistance to the most 'at risk'
- Effective management of scarce resources

Over the last decade Australia has placed considerable emphasis on an early intervention strategy as part of the provision of employment assistance.

While by no means a perfect instrument, the JSCI has been shown to be a relatively good predictor of the chance of a job seeker becoming long term unemployed and a better approach than targeting services to job seekers without regard to their profiling information.

The main success of the JSCI to date has been to stream job seekers to appropriate forms of assistance and levels of funding depending on the level of disadvantage. This in turn has helped to reduce deadweight costs but also ensured the provision of assistance to 'at risk' job seekers early in their unemployment spell before their barriers to employment become entrenched.

Extensive evaluations and reviews of the profiling instrument have led to refinements in the Centrelink interview to collect the JSCI information which has led to improved accuracy. The profiling information is accessible to Job Network providers and so enhances their assessment capabilities.

A side effect of the JSCI has been the improvement of profiling information. This in turn has proven invaluable for net impact studies and the provision of the Star Ratings.

[Conclusions]

Detailed profiling information is

- Very useful for targeting resources
- Highly desirable for the assessment of appropriate interventions
- Preferable to past alternatives

It is not perfect. Important issues that need to be dealt with to ensure an effective tool include

- Implementation, accuracy, full range of factors and predictive power of the model

To sum up, Australia has been committed to an early intervention strategy for some time and is likely to be for some time in the future. While there are costs involved there are many benefits for programme and policy officials, service providers and hopefully, if we all do our jobs well, the job seeker through increased job opportunities. I think the real question now is not whether we should be using profiling information to its fullest extent but rather can we justify not doing this.

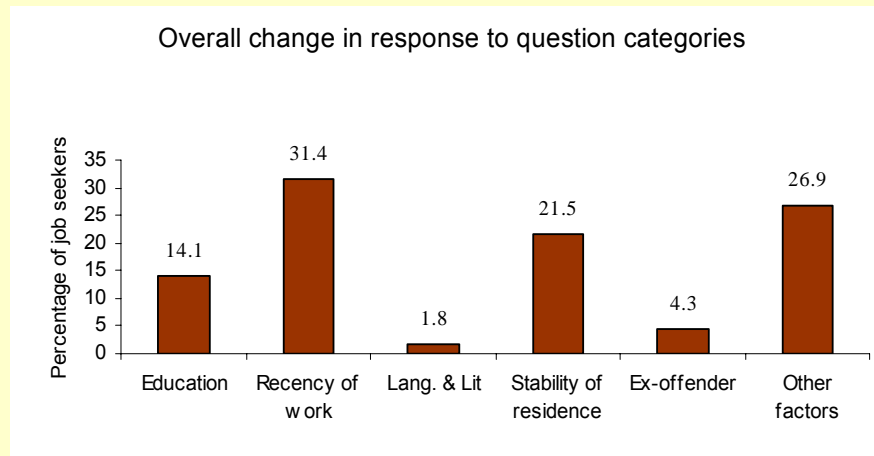
[Factors no longer used]

- Unemployment duration
- Transport
- Proximity to labour markets
- Small community dynamic

The revision of the JSCI as part of the introduction of the *Active Participation Model* included the removal of four of the factors under the original JSCI. Unemployment duration has been omitted as this factor now determines access to assistance for those who remain unemployed for 12 months or more.

Statistical analysis showed that the 'access to transport' factor did not significantly assist the identification of the most disadvantaged job seekers. The 'proximity to labour market' factor is now accounted for under the geographic factor, and the 'small community' factor has been replaced by the geographic factor with an increased range of points for Indigenous job seekers.

Differences between collection methodologies



- Other factors – refers to those affecting the ability to work (medical conditions)

Departmental research suggests that job seekers are less likely to reveal sensitive information in the Centrelink interview than in telephone interviews because they are concerned about the potential ramifications on their eligibility for income support (a function performed by Centrelink) and employment prospects. The telephone methodology assured job seekers that any information revealed would not be made available to Centrelink or Job Network members in an attempt to encourage job seekers to reveal more information. In practice this would not be possible and the advantage of the telephone interview may be lost to some extent. It is clear, however, that collecting personal information is sometimes difficult if it is not possible to maintain anonymity. Centrelink staff or Job Network providers must be encouraged to be diligent when applying or updating the JSCI and careful to gain the job seeker's confidence so that all details relating to disadvantage are revealed.

Options for targeting assistance

- the no profiling option
- targeting assistance based on membership of a client group such as Indigenous, those with disabilities, sole parents, youth

One question that can be asked to determine the effectiveness of the JSCI is how does it compare with other alternatives such as the 'no profiling' option or targeting particular client groups.

If we think that the JSCI is a reasonable predictor of the chance of becoming long term unemployed and our interventions are effective then targeting using the JSCI would be preferred over no profiling.

In a sense, the 'no profiling' option is the lazy approach which makes no attempt to use the extensive information available on job seeker characteristics which are known to have an effect on employment prospects. From Australia's point of view we would argue that the no profiling approach fails to address the objective of targeting more expensive assistance to the most disadvantaged and could lead to higher levels of long term unemployment because of the failure to intervene early in the unemployment spell. We also have confidence that the JSCI can do its job.

[Acceptance by providers]

- Three quarters of Intensive Assistance providers and a half of Job Search Training providers thought that less than 20% of job seekers were inappropriately classified
- 4% of Intensive Assistance providers and a fifth of Job Search Training providers thought that over half the job seekers referred to them were inappropriately classified

The views of both Job Network providers and Centrelink staff can also provide some indication of the perceived accuracy of JSCI scores. As reported in the Job Network evaluation stage 3 report a survey of providers in 2001 found that while there was general acceptance of the JSCI there was concern among some providers about its accuracy. The survey showed that nearly three quarters of Intensive Assistance providers thought that less than 20% of job seekers were inappropriately classified. For Job Search Training providers, nearly half thought that less than 20% of job seekers were inappropriately classified. Around 21% of Job Search Training providers and 4% of Intensive Assistance providers thought that over half the job seekers referred to them were inappropriately classified.

In qualitative research some providers indicated that many of the job seekers referred to them should have been referred to either a more intensive service or to services outside Job Network. Providers who believed job seekers were misclassified attributed this mainly to Centrelink's administration of the instrument. It is important, however, to put the views of providers on the level of misclassification into context. Some of their concern may result from a desire to increase the proportion of job seekers classified at a higher level, thus increasing funding, and unrealistic expectations about what the application of the JSCI can realistically achieve.

Referral to commencement rate

- The proportion of referrals that subsequently commence is now around 36% for job search training and 60% for customised assistance
- Prior to the introduction of the *Active Participation Model*, the proportion of referrals that commenced was around 30% for Job Search Training and around 60% for Intensive Assistance

Inappropriate referrals to various forms of employment assistance in terms of the proportion who actually commence has been an issue for the Job Network and could be seen as an indication of poor targeting of assistance. Referring job seekers to programmes inappropriately places a burden on providers who are required to deal with these job seekers and on job seekers who need to respond to the referral or risk breach action.

Prior to the introduction of the *Active Participation Model*, referrals to Job Search Training and Intensive Assistance were achieved via an automated referral process using eligibility (including the JSCI score) and job seeker availability information from administrative data. Under these arrangements the proportion of referrals that commenced was around 30% for Job Search Training and around 60% for Intensive Assistance.

Changes have been made to the referral process under the *Active Participation Model*. Centrelink now refers job seekers to Job Network Providers at registration. Job seekers then stay with their Job Network provider while they remain on unemployment allowance. Job Network members now trigger referrals to assistance. Job seekers will be referred to job search training around 3 months after registration and to customised assistance if the JSCI score is high enough at registration or otherwise around 12 months after registration. Job Network members will not attempt a referral if they know the job seeker is not available for commencement.

The proportion of referrals that subsequently commence is now around 36% for job search training and 60% for customised assistance. While some improvement has been achieved for job search training many who are referred are still not commencing. The likely reason is that recent changes to the job seeker's circumstances are simply not known by the Job Network member at the time of referral.

What happens to those who are referred but do not commence?

Surveys of those who are referred but did not commence show for Job Search Training

- 56% had found a job or already had a job
- 10% were studying
- 7% were suffering ill health
- 5% had caring responsibilities

For Intensive Assistance

- 34% had found employment
- 19% were suffering ill-health
- 9% had caring responsibilities
- 10% reported that they had been told they were no longer eligible for assistance

The department has conducted surveys of job seekers who were referred to a service but did not commence seeking their reasons for not commencing. It was found that 56% of those referred to Job Search Training who did not commence had found a job or already had a job, 10% were studying 7% were suffering ill health and another 5% had caring responsibilities. The corresponding proportions for those referred to Intensive Assistance were 34% had found employment, 19% were suffering ill-health, 9% had caring responsibilities and 10% reported that they had been told they were no longer eligible for assistance.

While a significant issue for the Job Network inappropriate referrals are not likely to be due to the JSCI.

[Advantages of the model]

This model would have the following key advantages:

- it is directly related to the key performance measures for the Job Network
- all data are readily available from administrative systems rather than from surveys and
- the information could be updated on the latest performance information every 6 months at around the time of the release of the Star Ratings

This model would have the following key advantages:

it is directly related to the key performance measures for the Job Network and so would help drive provider performance which in turn would help achieve key policy objectives such as increased outcomes for long term unemployed job seekers;

all data are readily available from administrative systems rather than from surveys of job seekers which are expensive, suffer from non-response bias and have time delays associated with the collection of the data; and

the information could be updated on the latest performance information every 6 months at around the time of the release of the Star Ratings.

Another possibility would be the use of profiling information to set the outcomes fee. This was done in the past by using the JSCI score as not only an indicator of the level of disadvantage but also of the commencement and outcome fee for particular job seekers. A more sophisticated method could be to set the commencement and outcomes fees for each job seeker based on their profile and the expected outcomes rate. This would overcome problems identified by the Productivity Commission with the outcomes fee structure which did not take into account differences in labour markets. This meant that Job Network members in regional and rural areas performing at the same level as providers in metropolitan areas would receive lower incomes because they operated in areas with lower outcome levels.

Development work is also required for the JSCI as it applies to those on non-activity tested benefits. These job seekers are reluctant to seek employment or access Job Network services because of fears it may affect their benefits and so have very different motivations for seeking work. It is expected that expected changes to the income support system will encourage those on Disability Support Pensions, Single Parent Pensions among others to access Job Network services and ways to better assess their profile will need to be developed

Star Ratings

