

Health outcome measures for WRPs

In relation to the WRP framework review, there's a clear opportunity to help advance SIRA's values-based care vision by requiring WRPs to establish and implement systems that:

- are aligned to the 'Quadruple Aim' for delivery of healthcare; and
- collect, analyse and report trustworthy data against meaningful measures of health status outcomes attained through the course of service.

Workplace rehabilitation services have long been measured by way of RTW rates and employment durability based on 'end-of-service' work status codes. Service cost-efficiency measures (mean case duration and cost) for whole caseloads are also monitored. There are conceptual and structural problems with these measures that, if retained, will undermine SIRA's values-based vision for health outcomes.

Problems with 'work status codes'

The work status codes are not specific or sensitive to the various levels of employment participation that an injured person can attain.

The codes also place emphasis on the term 'work capacity', which according to the legislation relates not only to 'a present inability' to return to pre-injury employment or the ability 'to return to work in suitable employment', but also to 'capacity to earn'. This double-barrelled term creates some coding problems.

A case in point: a worker has been able to return to his pre-injury duties, hours and earnings only because the employer has been able to make reasonable adjustments to accommodate his disability. On one hand, the worker has returned to a modified job (suitable employment) – modified because of a 'present (and persisting) inability'. On the other, the worker has returned to pre-injury employment for which he no longer has a 'present (and persisting) inability' due to the reasonable adjustments made. What code applies: 01 or 02?

A second case in point: A worker who has not been able to return to full-time pre-injury employment because of lawful termination (on the grounds of incapacity) has secured new full time employment. The worker had recently been assessed as having capacity for pre-injury employment. He is performing all job demands and requirements without restriction, but the new role pays less than the pre-injury job. What code applies: 03 or 04?

A third case in point: a worker who has acquired a disability for pre-injury employment has been assessed as having capacity for some suitable employment. The worker has obtained a new job that suits his abilities. He continues to require necessary treatment and care and remains certified as having capacity for suitable employment. The new job pays more than the pre-injury job. Does the worker still have 'current work capacity' because of the persisting inability for pre-injury employment? Or does the worker have 'full (pre-injury) work capacity' because he is earning more? Which code applies: 04 or 03?

Further to coding problems, the inclusion of the language of 'work capacity' in the codes can promote an attentional bias towards work capacity rather than work participation as the intended

outcome. This bias has come about by the value placed by claims agents on work capacity in response to the 2012 reforms; and it has become manifest no less in the increased ratio of medical case conferences to workplace-based activities (as a proportion of total rehabilitation case activities and costs) in pursuit of ‘capacity upgrades’. Consequently, activities centred on restoring or optimising functional abilities and independence in instrumental work-related activities – all necessary for enabling and sustaining employment participation – are frequently absent from rehabilitation programs.

In the tables below, I have outlined the problems and limitations with the current work status codes.

'Working' codes	Work status	Definition	Problems
01	Working same employer – full work capacity	Working with same employer with full work capacity in pre-injury employment.	<p>As defined, the code does not distinguish between persons who are:</p> <ul style="list-style-type: none"> (a) working in their pre-injury roles without adjustments (i.e. persons without acquired disability), and (b) working pre-injury hours in pre-injury roles that have been reasonably adjusted to accommodate their disabilities. <p>In both cases (a) and (b), the persons have ‘full work capacity’ i.e. no longer receiving weekly payments. However, code 02 may also be applied to persons in category (b) because of the contradictions with that code (see below).</p>
02	Working same employer – current work capacity	<p>Working with same employer in employment for which the worker is currently suited, but not in their pre-injury employment due to a reduced capacity.</p> <p>This may be due to the worker working fewer hours than prior to the injury/disease or the same hours in a job with lower remuneration, or working suitable employment with full income and full hours.</p>	<p>This code pertains to all persons who have returned to some form of suitable employment with their pre-injury employers irrespective of the hours of duty (e.g. the code applies to persons working from a little as one hour/week to their pre-injury hours).</p> <p>The code covers large variations in the levels of employment participation and weekly payments. Code 02 is not sensitive to such variations.</p> <p>As defined, the code does not apply to persons who have returned to their pre-injury employment. However, the inclusion of the term ‘current work capacity’ in the code is contradictory because that term applies to persons</p>

			who have returned to their pre-injury employment but their capacity to earn in that employment is less than before the injury.
03	Working different employer – full work capacity	Working with a different employer with full work capacity and assessed work capacity as pre-injury employment status.	<p>As defined, the code requires a person to be ‘assessed’ as having capacity for pre-injury employment. That implies that persons who are not able to do their pre-injury employment are not included, even though they have obtained substantive employment and are earning the same or more than pre-injury.</p> <p>In practice, this limits the application of the code to persons who have no participation restrictions – where working with a different employer has no relationship to a persisting inability (arising from the injury) to return to pre-injury employment</p>
04	Working different employer – current work capacity	<p>Working with a different employer in employment in work for which the worker is currently suited but not in their pre-injury employment due to a reduced capacity.</p> <p>This may be due to the worker working fewer hours than prior to the injury/disease or the same hours in a job with lower remuneration, or working suitable employment with full income and full hours.</p>	<p>Presuming that ‘full income with full hours’ means pre-injury income and hours, a literal interpretation of the code means persons who (a) have a persisting inability for their pre-injury employment, and (b) are able to obtain any level of employment with another employer, are included.</p> <p>Like code 02, the code covers large variations in the levels of employment participation and weekly payments. Code 04 is not sensitive to such variations.</p>

‘Not working’ codes	Work status	Definition	Problems
06	Not working – no current work capacity	Not working and has no current work capacity.	<p>The code does not distinguish between persons who are employed and unemployed.</p> <p>Code 06 for an employed person is a better outcome than 06 for an unemployed person.</p>

08	Not working – has current work capacity	Not working but has current work capacity.	<p>The code does not distinguish between persons who are employed and unemployed.</p> <p>Code 08 for an employed person is a better outcome than 08 for an unemployed person.</p>
09	Not working – not entitled to weekly benefits	Not working and not entitled to weekly benefits. This includes where a worker exceeds the second entitlement period but does not meet the criteria in section 38; and where a claim has been resolved via commutation or work injury damages.	<p>The code does not distinguish between persons who are employed and unemployed.</p> <p>Code 09 for an employed person is a better outcome than 09 for an unemployed person.</p> <p>There is no work status code applicable to persons who are employed but are not working due to matters not arising from or related to their compensable injuries.</p>
10	Not working – retired	Weekly payments ceased due to retirement limitation.	<p>The code pertains ONLY to persons who are no longer eligible for weekly payments due to s52 of the 1987 Act.</p> <p>There is no work status code applicable to persons who are no longer working due to their decisions to retire.</p>

Problems with ‘RTW rates’

‘RTW’ is a multifactorial outcome that is highly dependent on the inputs from many actors in the scheme. Used at an aggregate level (i.e. when analysing scheme-wide outcomes), it is a useful proxy measure of the health of a population at a point in time post injury. However, it provides no insight into the many valued health outcomes attained by injured persons in the course of their rehabilitation.

Contributions to the RTW process and the outcomes attained are made by multiple actors whose responsibilities vary in context and time context. It is, therefore, difficult to identify the extent to which specific actors and their activities contribute to RTW outcomes, even when RTW rates are measured and reported by (and attributed to) actors such as WRPs. This is especially so because it is not practicable (nor, perhaps, ethical) to observe and measure counterfactuals (i.e. the RTW outcomes that would have been attained without the activities of one or more actors). Moreover, one cannot conclude from RTW outcomes and rates, as they are presently measured,¹ the changes in employment participation encountered by injured persons from the commencement to the conclusion of their rehabilitation programs.

Rethinking RTW measures – from ‘RTW’ to ‘change in employment participation’

Ideally, the work status codes should be modified so that:

¹ Based on the most applicable work status code at the end of service and at 13 weeks post.

- the ‘working codes’ (a) reflect the levels of employment participation that an injured person can attain, and (b) have no regard for work capacity;
- the ‘not working codes’ distinguish the (a) employed from the unemployed, and (b) the retiree from the person ineligible for weekly payments due to retiring age.

Work status codes should be recorded at intake assessment and at end of service in order to demonstrate the change in employment participation attained. ‘RTW outcome codes’ could be formed by the pairing of the applicable work status codes. In the appendix, I have drafted a matrix to demonstrate how this could be done.

‘RTW’ as one of many measures comprising health

Attainment of RTW requires WRPs to customise their services to individuals with varied clinical needs, social circumstances and personal preferences. This demands considerable variation in how services are consumed and how the desired changes in employment participation are produced.

For example, persons whose injuries only affect their abilities to work should respond to interventions discretely centred on restoring, optimising and maintaining work activities. For those persons, RTW (change in employment participation) and financial independence may be the most valued health outcomes. Whereas for persons whose injuries affect their abilities to perform their roles in domestic, educational and community settings as well as work will have different priorities and value a wider range of health outcomes. Valued health outcomes are likely to include not only RTW and financial independence but also return to / independence in their various roles in society – roles that enable and support their return to sustained employment. Accordingly, rehabilitation interventions should focus on restoring or optimising participation and independence in those roles. To do otherwise for persons with can result in unsatisfactory experiences with RTW, including recurrent pain amplification and ‘flare-ups’, diminished self-efficacy, persisting pain, disputation and unsustainable levels of participation.

For WRPs, this means that the effectiveness and cost-efficiency of their services should be measured in relation to the purposes (i.e. intended outputs) of those services. Change in employment participation may be the sole output for a person with relatively low needs; but for persons with relatively complex needs and circumstances, it is but one of those outputs – one that is often co-dependent on other outputs. Whilst RTW may be a credible proxy health outcome measure for those with low needs, it is unlikely to be for others – especially when it is possible for persons to RTW but concurrently be unable to perform other valued roles because of persisting health problems arising from their injuries. For this reason, RTW as an outcome should be placed within the frame of health i.e. one of many measures that comprise health.

What health outcomes should WRPs monitor, measure and report?

In principle, health outcomes should be defined in terms of the health gains produced from baseline.

RTW measure:	Change in employment participation (work status code at intake vs work status code at end of service)
Social participation	Change in participation in (relevant) domestic/community/education roles (from

measures:	intake to end of service)
	Note: Both RTW and social participation measures could be measured by means of a goal-attainment scale. Goal-setting and attainment are integral to the current HWCA Principles of Practice for WRPs.
Quality of Life (satisfaction) measure:	<p>Change in life satisfaction (from intake to end of service).</p> <p>A suitable Patient Reported Outcome Measure (PROM) should be used to measure the change in a person's satisfaction with key dimensions of their health from post-injury baseline. Various PROMs exist e.g. Life Satisfaction Index (LSI), WHO QoL BREF, Short Form-36 and EuroQol Five Dimensions (EQ-5D), et al. LSI is presently used as an outcome measure in rehabilitation for veterans. A relevant Quality of Life measure should at a minimum examine a person's satisfaction with their level of participation in employment and other valued social roles.</p>
'Change in treatment/care' measure:	<p>Further to the above measures, it would be prudent for WRPs to monitor a person's use and, therefore, dependence on treatment and care from intake to the end of service.</p> <p>Whilst 'change in treatment/care' may not be a direct output of a rehabilitation service, it nonetheless can provide a useful insight into the health status of persons who have completed a rehabilitation program and attained various levels of participation in employment and other valued roles.</p> <p>For instance, it would be interesting to identify persons who have been able to RTW but continue to receive medical and related treatment and care, including GP and specialist care, allied health, and analgesia (especially opioids) and other medications.</p>

Example of a goal-attainment scale

0	Unfavourable	Not participating; sustained incapacity/unemployment.
1	Less than expected	Decrease in participation from intake to end of service.
2	Sustained	Sustained level of participation from intake to end of service.
3	Gain	Gain in participation from intake to end of service. Goal(s) attained as expected.

On the limits of average case costs and duration as cost-efficiency measures

Measures of average service cost and duration assume that service provision and quality is uniform. Such measures could be used to help highlight variations in resource allocation across WRPs, locations and client cohorts. However, comparisons of duration and expenditure in and of themselves are unhelpful because they do not account for the differences in service intensity that occur due to the varied needs and circumstances of injured persons, particularly those with similar conditions.

Average duration relies on the assumption that shorter duration implies greater efficiency and reduced costs; but in most cases there is no ideal duration. Shorter durations may be inefficient because earlier cessation with lower cost can increase the probability of complications, slower recovery, and additional episodes of treatment, rehab and care. Longer duration can reflect inefficiencies with administrative processes and costs imposed by third parties/funding bodies (e.g. delayed approval processes, amplified reporting/communication requirements, requests for additional 'proxy-claims management' activities, etc).

If measures of service cost and duration continue to be required, the variances in client characteristics, service context (location), service inputs and outcomes need to be considered in any comparative analysis.

Appendix: 'Change in Employment Participation' matrix

		@ End of service												
		Unemployed		Employed		<40% PIH		40-99% PIH		100% PIH				
@ Intake	WSC	o6d	o8d	o6c	o8c	o4b	o2b	o4a	o2a	o2	o3	o1		
	Unemployed	o6d	o6d-o6d	o6d-o8d	o6d-o6c	o6d-o8c	o6d-o4b	o6d-o2b	o6d-o4a	o6d-o2a	o6d-o2	o6d-o3	o6d-o1	
		o8d	o8d-o6d	o8d-o8d	o8d-o6c	o8d-o8c	o8d-o4b	o8d-o2b	o8d-o4a	o8d-o2a	o8d-o2	o8d-o3	o8d-o1	
	Employed	o6c	o6c-o6d	o6c-o8d	o6c-o6c	o6d-o8c	o6c-o4b	o6a-o2b	o6c-o4a	o6c-o2a	o6c-o2	o6c-o3	o6c-o1	
		o8c	o8c-o6d	o8c-o8dc	o8c-o6c	o8c-o8c	o8c-o4b	o8c-o2b	o8c-o4a	o8c-o2a	o8c-o2	o8c-o3	o8c-o1	
	<40% PIH	o4b	o4b-o6d	o4b-o8d	o4b-o6c	o4b-o8c	o4b-o4b	o4b-o2b	o4b-o4a	o4b-o2a	o4b-o2	o4b-o3	o4b-o1	
		o2b	o2b-o6d	o2b-o8d	o2b-o6c	o2b-o8c	o2b-o4b	o2b-o2b	o2b-o4a	o2b-o2a	o2b-o2	o2b-o3	o2b-o1	
	40-99% PIH	o4a	o4a-o6d	o4a-o8d	o4a-o6c	o4a-o8c	o4a-o4b	o4a-o2b	o4a-o4a	o4a-o2a	o4a-o2	o4a-o3	o4a-o1	
		o2a	o2a-o6d	o2a-o8d	o2a-o6c	o2a-o8c	o2a-o4b	o2a-o2b	o2a-o4a	o2a-o2a	o2a-o2	o2a-o3	o2a-o1	
	100% PIH	o2	o2-o6d	o2-o8d	o2-o6c	o2-o8c	o2-o4b	o2-o2b	o2-o4a	o2-o2a	o2-o2	o2-o3	o2-o1	
		o3	o3-o6d	o3-o8d	o3-o6c	o3-o8c	o3-o4b	o3-o2b	o3-o4a	o3-o2a	o3-o2	o3-o3	o3-o1	
		o1	o1-o6d	o1-o8d	o1-o6c	o1-o8c	o1-o4b	o1-o2b	o1-o4a	o1-o2a	o1-o2	o1-o3	o1-o1	

Key to suffixes

- 'a' = working between 40% and 99% of pre-injury hours (for a 38 hr/week, 40% is more than 15 hrs/week)
- 'b' = working less than 40% of pre-injury hours (for a 38 hr/week, less than 40% is less than 15 hrs/week)
- 'c' = employed but not at work
- 'd' = unemployed

		Unemployed		Employed		<40% PIH		40-99% PIH		100% PIH			
Unemployed	WSC	o6d	o8d	o6c	o8c	o4b	o2b	o4a	o2a	o2	o3	o1	
	o6d	o6d- o6d	o6d- o8d	o6d- o6c	o6d- o8c	o6d- o4b	o6d- o2b	o6d- o4a	o6d- o2s	o6d- o2	o6d- o3	o6d- o1	
	o8d	o8d- o6d	o8d- o8d	o8d- o6c	o8d- o8c	o8d- o4b	o8d- o2b	o8d- o4a	o8d- o2a	o8d- o2	o8d- o3	o8d- o1	
Employed	o6c	o6c- o6d	o6c- o8d	o6c- o6c	o6d- o8c	o6c- o4b	o6a- o2b	o6c- o4a	o6c- o2a	o6c- o2	o6c- o3	o6c- o1	
	o8c	o8c- o6d	o8c- o8dc	o8c- o6c	o8c- o8c	o8c- o4b	o8c- o2b	o8c- o4a	o8c- o2a	o8c- o2	o8c- o3	o8c- o1	
	o4b	o4b- o6d	o4b- o8d	o4b- o6c	o4b- o8c	o4b- o4b	o4b- o2b	o4b- o4a	o4b- o2a	o4b- o2	o4b- o3	o4b- o1	
40-99% PIH	o2b	o2b- o6d	o2b- o8d	o2b- o6c	o2b- o8c	o2b- o4b	o2b- o2b	o2b- o4a	o2b- o2a	o2b- o2	o2b- o3	o2b- o1	
	o4a	o4a- o6d	o4a- o8d	o4a- o6c	o4a- o8c	o4a- o4b	o4a- o2b	o4a- o4a	o4a- o2a	o4a- o2	o4a- o3	o4a- o1	
	o2a	o2a- o6d	o2a- o8d	o2a- o6c	o2a- o8c	o2a- o4b	o2a- o2b	o2a- o4a	o2a- o2a	o2a- o2	o2a- o3	o2a- o1	
100% PIH	o2	o2- o6d	o2- o8d	o2- o6c	o2- o8c	o2- o4b	o2- o2b	o2- o4a	o2- o2a	o2-02	o2- o3	o2-01	
	o3	o3- o6d	o3- o8d	o3- o6c	o3- o8c	o3- o4b	o3- o2b	o3- o4a	o3- o2a	o3-02	o3- o3	o3-01	
	o1	o1- o6d	o1- o8d	o1- o6c	o1- o8c	o1- o4b	o1- o2b	o1- o4a	o1- o2a	o1-02	o1-03	o1-01	

Colour code:

- Blue – Working - Recovered at work (i.e. remained at work with same employer on PIH)
- Green – Working - Increased employment participation (same or new employer)
- Yellow – Working - Sustained same level of participation in employment (same or new employer)
- Light grey – Working - Decreased employment participation (same or new employer)
- Orange – Not Working - Decreased employment participation (same or new employer)
- Red – Not working - Sustained same level of participation in employment (same or new employer)