**Table 1 Study Characteristics (prognostic factors)**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Paper ID** | **Recruitment dates** | **Country** | **Participants** | **Study setting** | **Total number of participants** | **Mean age (years)** | **Absence definition** | **Absence duration (baseline)** | **Follow-up (years)** | **Prognostic factors measured** |
| Abasolo et al. 2008[39] | 1998 - 2001 | Spain | Patients receiving temporary work disability | Primary care | n= 3311  Women: 1656 (50%) | 41 (+/- 12) | Days of sick leave per episode | Median 13 days | 2 | Age  Female sex  Self-employed  Married  Low educational level  Responsible for most or all of the household chores  Work position covered  Unemployed  Manual worker  Seated for long periods  Must adopt squatting position  Must stand up for long periods  Physically demanding job  Must perform anterior flexion of the neck |
| Abasolo et al. 2008[39] |  |  |  |  |  |  | Recurrence of temporary work disability – any successive temporary work disability during the study period |  |  | Female sex  General work regimen  Married  Low educational level  Responsible for most or all of the household chores  Work position covered  Unemployed  Manual worker  Seated for long periods  Must adopt squatting position  Must kneel frequently  Must stand up for long periods  Physically demanding job  Must perform anterior flexion of the neck  Must perform anterior flexion of the trunk  Must perform later flexion of the trunk  Duration of previous temporary disability episode (per day) |
| Abenhaim et al. 1995 [26] | 1988 | Canada | Aged 15-65 with at least 1 day of compensated absence from work, injury to the thoracic, lumbar or sacral segments of the spine | Medical / healthcare records | n= 1848  Women: 425 (23%) | Not reported | Compensated absence  Chronicity defined as accumulation of 180 days or more od compensated absence from work over all episodes that occurred during the study period | At least 1 day | 2 | Diagnosis (specific versus non-specific) |
| Gabel et al. 2012 [31] | Not reported | Australia | Acute MSK injury to the spine, upper or lower limb sustain at work within the previous 5 weeks | Outpatients | 143  Women: 61 (43%) | Mean 38.9 (SD 10.5); range 18-65 | Long term absence defined as >28 paid days off  No absenteeism 0 paid days off | 72% absent for 1-28 days  26% absent for >28 days | 0.5 | 21 item Orebro Musculoskeletal Pain Questionnaire  12 item Orebro Musculoskeletal Pain Questionnaire |
| Sheehan et al.2022 [43] | 2010-2015 | Australia | Low back pain claims with a minimum of 4 recorded primary care service payments greater than 2 weeks paid time loss and from the workers compensation schemes of 3 Australian states. | Health records (insurance) | 18,696 claims (not necessarily individual people)  Women: 6916 (7%) | Not reported | Working time lost, defined as the number of weeks of income support payments paid (measured in paid calendar weeks) | At least 1 week | 5 | Continuity of care with usual care provider measured with the usual provider continuity index |
| Lederer et al. 2014 [32] | 2000 - 2002 | Canada | Claim incurred between 1st Jan 2001 and 31st Dec 2003, benefits granted for at least 90 days and coded as a new event (not a relapse) with an upper body injury site | Health records (insurance) | 2210  Women: 9032 (40.9%) | Not reported | Time on compensated benefits calculated as the difference between the date of injury and date of the last payment of benefits for a maximum of a 3 year period | At least 3 months (90 days) | 0.5 | Age  Gross annual income  Dependents  Area of residence  Industry  Injury type  Injury site  Claim history (previous 10 years) |
| Lotters et al. 2006 [34] | Not reported | The Netherlands | On sick leave due to non-specific musculoskeletal disorders for 2-6 weeks | Occupational health | 253  Women:76 (30%) | 43 (SD9) | Duration of sickness absence | 2-6 weeks | 1 | Perceived pain – Low back pain  Perceived pain – other MSK  Perceived physical workload  Visiting a specialist 12 months prior to current sickness absence  Own perception of RTW  Presence of sciatica |
| Nordin et al. 1997 [29] | March 1994 – July 1995 | USA | All employees having a first episode of non-specific low back pain (defined with ICD9 codes) within 1 week of episode onset | Hospital / rehabilitation | 162  Women: 33 (20%) | 39.9 (range 20–69) | Number of days (ascertained through computerized company records) | 1 week | 0.12 | Abnormal heel walk  Oswestry quartile  Work related injury  Exposure to whole body vibration  Physically heavy work |
| **\***Okurowski et al. 2003 [28] | Jan 1997 – Mar 2000 | USA | Cases who were out of work at 3 months post injury as a result of uncomplicated low back pain and who had similar level of nurse case manager evaluation | Health records (insurance) | 986  Women: 256 (26%) | Not working: 37 (SE 0.41)  Working (SE 0.54) | Working or not working at 6 months | 3 months | Not reported | Age  Timeliness of referral  Language barriers  Attorney involvement |
| Richter et al. 2011 [35] | Nov 2004 – Dec 2006 | The Netherlands | New work disability insurance claim episodes from those with non-specific MSK symptoms who were unable to fulfill their job for more than 25% according to medical assessment | Health records (insurance) | 276  Women: 20 (7%) | 45 (SD 7) | claim duration, defined as the number of calendar days the participant received work disability compensation between completion of the baseline questionnaire and one-year follow up, without adjustment for the level of work disability (gross duration). The end of a claim period was defined as having less than 25% work disability according to a medical assessment, with a minimum duration of 4 weeks | Mixed duration but up to 6 months | 1 | Age  Gender  General health  History of similar symptoms  Pain severity previous 6 months  Location of MSK symptoms (upper extremity; back; lower extremity; multiple locations  Duration of symptoms (2-6 months; >6 months)  Functional status neck pain  Functional status back pain  Insured daily compensation  Deferment period  Fear of movement  Self-predicted timing of RTW  Job satisfaction  Willingness to participate in RTW |
| Selander et al. 2007 [36] | June 2003 – June 2004 | Sweden | Participants were on long term sick leave (over 4 months) due to back pain problems | Hospital/  rehabilitation | 347  Women: 160 (46%) | Mean 42 (male) Mean 41 (female) | Absence: Bivariate outcome: Successful rehabilitation if client had lower degree of sickness absence or none at all c.f. their baseline absence. Unsuccessful rehabilitation if client received same or more sickness allowance | Between 3 and 11 weeks Mean 63 days from date of injury | 0.5 and 1 | Age  General health  Vitality  Internal locus of control |
| Shiels et al. 2004 [44] | Not reported | UK | Not reported | Primary care | 864  Women: 411 (47.6%) | 43.1 | (1) total duration of sickness episode (calculated by  totaling all periods of incapacity on the sickness certificates.  In the case of issue not being continuous, separate episodes were assumed) (2) greater than 28-week incapacity | Not reported | Not clear but greater than 0.1 years | Age  Sex  Deprivation  Type of MSK disorder |
| Smith et al. 2014 [40] | 1 Jan 2005 – 31 Dec 2007 | Australia | Wage replacement claimants with an incapacity start date between 1st Jan 2005 and 31st Dec 2007 which were either (mental health†), back or upper extremity claims from full or part time employees | Health records (Insurance) | 10,899  Women: 4197 (38.5%) | 15-24y = 6.2%;  25- 34y=17.7%; 35-44y=29.7%; 45-54y=36.8%; 55+=16.9% | No. of days of total wage replacement over 2 years from first day of absence | 1 day | 2 | Age when injured  Gender  Prior claim  Days between injury date and first day of compensation  Employment type  Occupational strength requirements  Occupational time pressure  Occupational autonomy  Managing employer size  Industry  Year |
| Steenstra et al. 2015 [41] | 1 Jan – 30 Jun 2005 | Canada | Compensated work absence after an uncomplicated back injury | Health records (Insurance) | 1422  Women: 552 (38%) | 41.3 (SD 10.5) | Time on compensation benefits until RTW and time to further period of compensated absence defined as recurrent of same injury | 4 weeks | 2 | Age  Gender  Previous claim  Physical demands manual  Language (non-French or English)  Union member  Early RTW program  Employer continued salary  Employer doubt about work related injury  No recovery expected  Worker signed RTW forms  Public transport to work  Functional abilities  Opioid prescription |
| Truchon et al. 2012 [37] | Oct 2006 – Nov 2008 | Canada | Workers receiving income replacements benefits because of common low back pain. Aged 18 or over and affected by a first or new episode of low back pain in the last 12 months. On sick leave for a minimum of 28 days but no longer that 83 days | Population / National based | 535  Women: 218 (40.7%) | 42 (SD10) | Number of days of absence. Calculated on the basis of dates supplied by the participants about work events during the phone interviews at follow-ups (e.g. returns to work, recurrence of disabling LBP). A total absence period was calculated for each participant from injury date (minimum 35 days; maximum 340 days). This absence period could include multiple sick leaves. Periods of light duty work were considered as returned to work periods even if treatments were provided one or many days per week. Participants were divided into two groups on the basis of this absence period: 182 cumulative days and less, and more than 182 cumulative days. | Long term >/= 4 weeks | 1 | Fear avoidance beliefs work (FABQ-W)  RTW expectations (time)  Annual family income (pre-tax)  Last level of education attained \_elementary  Work schedule irregularity  Work concerns |
| Turner et al. 2006 [33] | Jul 2002 – Jun 2003 | USA | Workers how submitted workers compensation claims for work-related back pain and received at least 1 day of temporary total disability wage replacement (i.e. had at least 4 days of work disability as required for receiving wage replacement) | Health records (insurance) | 1068  Women: 328 (31%) | 39.2 (11.1) | Wage replacement compensation for temporary total disability (“work disability”) 6 months (180 days) after claim submission. Number of days of wage replacement receipt in this period was also examined (“work disability duration”).  Temporary total disability payments are stopped when a worker returns to work or is judged to be medically stable and able to work. | Mean 21.1 days (SD 9.7) | 0.5 | Recovery expectations  Mental Health  Catastrophising  Blame (work)  Blame (someone/something else)  Relations with co-workers  Work fear avoidance |
| Van Duijn et al. 2005 [38] | Not reported | The Netherlands | Participants were on sick leave with musculoskeletal complaints for between 2 and 6 weeks | Occupational health | 262 enrolled data presented on 164 who completed follow-up data  Women: proportion not clear | 43 (9) | Duration of sick leave time until RTW on full duty  RTW but in a modified work capacity (reduced hours, modified work during sick leave advised by OH) | 2 – 6 weeks | 1 | Modified work  Age  Duration in job  Prior sick leave  Chronic health  Severity of pain  Disability  Physical general health  Quality of life |
| Westman et al. 2008 [42] | 1998-2000 | Sweden | Employed 18-65 year olds sick listed between >28 and <180 days and/or had consulted the doctor about the same problem at least three times in the last 12 months (as recorded by the referring physicians) | Primary care | 158  Women: 110 (69%) | 47 (range 24-65) | Worsening or improving sick leave during follow-up | Not clear | 3 | Orebro Musculoskeletal pain questionnaire score  Function  Pain  Distress  Fear avoidance  RTW expectations  Coping |

**Key: \*** Study also presents a prognostic model: † Not included in the analyses: SE – Standard Error: SD – Standard Deviation:

**Table 2: Study Characteristics (prognostic models)**

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Paper ID** | **Recruitment dates** | **Country** | **Participants** | **Study setting** | **Total number of participants** | **Mean age (years)** | **Absence definition** | **Absence duration (baseline)** | **Follow-up (years)** | **Predictors in final model** | **Prognostic model performance** |
| Bosman et al. 2019 [45] | 2016-2018 | The Netherlands | On sick leave at baseline for low back pain defined using ICD codes | Occupational Health | 103  Women 28 (25%) | 47.4 (SD 10.49) | Still being sick listed due to low back pain at 180 days follow-up. Sick leave was defined as temporary paid leave off work with any injury or illness both work related and not work related | Mean 53.9 days (SD 30.0 days) | 0.5 | CatastrophisingMusculoskeletal work load  Disability | Calibration slope = 0.761 |
| Branton et al. 2010 [46] | Oct 2004- May 2005 | Canada | Claimants undergoing Functional Capacity Evaluation | Occupational Health | 147  Women: 45 (31%) | 43.3 (SD 11.1) | Future recurrence of benefits | 611 days | 1 | Age  Timeliness of referral  Language barriers  Attorney involvement | C statistic = 0.6  PPV 60%  NPV 54% |
| Du Bois et al. 2009 [47] | Not reported | Belgium | Sickness fund claimants who were work in capacitated by low back pain not requiring surgery | Health records (insurance) | 346  Women: 162 (47%) | 41 | The period an employee is absence from work with full pay as a result of injury | 98% reported absence duration of >12 weeks at baseline | 0.5 | Pain below the knee  Not very sure to return to work within 6 months (<10 on 10 point likert scale)  Very important interference of pain in daily activities ≥8 on 10 point likert scale) | c statistic = 0.801: 95% Confidence Interval: 0.727–0.876  ROC correctly identified 73.7% of the non-resumers and 78.4% of the resumers |
| Fulton-Kehoe et al. 2008 [48] | July 2002 – April 2004 | USA | Workers with accepted or provisional workers compensation back sprain claims for wage replacement benefits (work disability) | Health records (insurance) | 1885  Women: 603 (32%) | 39.4 | Long-term disability defined as the receipt of work disability payments 1 year after claim submission', where work disability payments 'end when a worker has returned to work or has been determined to be able to work' | Mean 83 days | 1 | Pain interference with work  Current work status (working vs not working)  Radiating pain | Primary model  AUC 0.79  Sensitivity 72%  Specificity 78%  PPV 35% |
| Okurowski et al. 2003 [28] | Jan 1997 – Mar 2000 | USA | Cases who were out of work at 3 months post injury as the result of uncomplicated low back pain | Health records (insurance) | 982  Women: 256 (26%) | Not working group 37.3 (SE0.42)  Working group 35.0 (SE0.54) | Absence defined as working or not working at 6 months | 3 months | 0.5 | Age  Timeliness of referral  Language barriers  Attorney involvement | C statistic = 0.6  PPV 60%  NPV 54% |
| Richter et al. 2011 [35] | Nov 2004 – Dec 2006 | The Netherlands | Individuals with:  New work disability insurance claim episode from November 2004 until December 2006  Participants with non-specific musculoskeletal symptoms  Unable to fulfill job for more than 25% according to a medical assessment. | Health records (insurance) | 276  Women: 20 (7%) | 45  (SD 7) | claim duration, defined as the number of calendar days the participant received work disability compensation between completion of the baseline questionnaire and one-year follow up, without adjustment for the level of work disability (gross duration). The end of a claim period was defined as having less than 25% work disability according to a medical assessment, with a minimum duration of 4 weeks. | Mixed | 1 | Age  History of similar symptoms  Duration of symptoms  Self-predicted timing of RTW  Job satisfaction | Not reported |
| Smith et al. 2014 [40] | Jan 2005 – Dec 2007 | Australia (Victoria) | Wage-replacement claimants with an  incapacity start date between January 1st, 2005 and  December 31st, 2007, which were either (mental health or)  back or upper extremity musculoskeletal claims; claims from  full-time or part-time employees | Health records (insurance) | 10,899  Women: 4197 (38,5%) | 15-24y = 6.2%; 25-34y=17.7%; 35-44y=29.7%; 45-54y=36.8%; 55+=16.9% | No. of days of total wage replacement over 2 years from first day of absence | 1 day | 2 | Not reported | 14.12% of predicted days of absence within 30 days of actual days of absence (22.31% within 31-60d; 25.68% within 61-90d; 37.89% more than 90 days out) |
| Steenstra et al. 2015 [41] | Jan 2005 – Jun 2005 | Canada | Individuals with compensated work absence after uncomplicated back injury | Health records (insurance) | 1442  Women: 552 (38%) | 41.3 (SD 10.5) | 1) time on compensation benefits until RTW  2) time to further period of compensated absence defined as recurrence of same injury | 4 weeks | 2 | *Time on benefits:*  Age  Sex  Physical demands  Union member  Early RTW  Recovery expected  Functional abilities  Opioid prescription  *Time until recurrence:*  Age  Sex  Physical demands  Opioid prescription  Early RTW  Functional ability | *Time on benefits:*  AUC: 0.71 (95%CI0.67-0.75) at 6 months  AUC: 0.79 (95%CI 0.74-0.84) at 24 months  *Time until recurrence:*  AUC: 0.60 (95%CI 0.54-0.64) at 1 month  AUC: 0.61 (95%CI 0.57-0.65) at 3 months  AUC: 0.61 (95%CI 0.57-0.65) at 6 months |
| Steenstra et al. 2016[49] | Jan 2005 – Jun 2005 | Canada | Workers who had a lost-time claim (LTC) for an uncomplicated back injury (strain or sprain) approved by the Workplace Safety and Insurance Board (WSIB) of Ontario  And participants from a RTW cohort study | Health records (insurance) | 1555  Women: 605 (39%) | WSIB group 41.3 (SD 10.5)  RTW group 44.0 (SD 10.2) | Time on benefits during a first claim for back pain as the length in calendar days of the first continuous episode of any wage replacement | At least 4 weeks | 1 | Model reported in Steenstra 2015 (above) plus:  Pain score | AUC = 0.80, (95 % CI 0.68, 0.91) at 180 days,  AUC = 0.88, (95 % CI 0.74, 1.00) at 360 days |
| Truchon et al. 2010 [50] | Apr 2002 – Sept 2013 | Canada | Compensated workers aged between 18 and 60 years, on sick leave for common LBP for a minimum of 3 weeks but no more than 11 weeks, and no previous episode of LBP in the preceding year | Health records (insurance) | 439  Women: 178 (40%) | 38 (SD 10) | Number of days absence | Between 3 and 11 weeks  Median 63 days from date of injury | 1 | Stress process model which included: Life events  Cognitive appraisal of LBP  Avoidance  Coping  Emotional distress  Disability | The adapted stress process model explained less than 20% of the variance of number of days of absence at 6 and 12 months |
| Truchon et al. 2012[37] | Not reported | Canada | French-speaking workers receiving income replacement benefits because of common LBP. | Health records (insurance) | 535  Women: 218 (40.7%) | 42 (± 10) | Number of days absence calculated from injury date | 61.7% had less than 182 days  38.3% had more than 182 days | 1 | Fear avoidance beliefs  RTW expectations  Annual family income  Last level of education attained\_elementary  Work schedule\_irregular  Work concerns | C statistic = 0.73 for predicting absence >182 days |
| Turner et al. 2006 [33] | Jul 2002 – Jun 2003 | USA | Workers 18 years or older who submitted Workers’ Compensation claims for work-related back pain and received at least 1 day of temporary total disability wage replacement (i.e., had at least 4 days of work disability, as required for receiving wage replacement) | Population based | 1080  Women: 328 (31%) | 45 (SD7) | The primary outcome was wage replacement compensation for temporary total disability (“work disability”) 6 months (180 days) after claim submission. Number of days of wage replacement receipt in this period was also examined (“work disability duration”).  Temporary total disability payments are stopped when a worker returns to work or is judged to be medically stable and able to work. | Mixed | 0.5 | Recovery expectations  Work fear avoidance | Not reported |
| Westman et al. 2008 [42] | 1998 - 2000 | Sweden | Employed -18 and 65 years old, sick listed ≥28 days - ≤180 days and/or had consulted the doctor about the same problem 3 times the last 12 months according to information from the referring physicians | Primary care | 158  Women 110 (69%) | 47 (range 24-65) | Impaired sick leave defined as a patient who maintains or increases her/his sick leave level at the follow-up or improved sick leave during follow-up defined as a patient who has decreased her/his sick leave level at follow-up | Sick leave, days previous 12 months 0–30 days 49 31 31–60 days 46 30 61–90 days 21 13 91–180 days 40 26 | 3 | Adjusting for age and earlier sick leave (p less than 0.2) factor I (function) and factor II (pain) significantly predicted sick leave after 3 years (factors derived from Orebro)  Orebro full scale | Sensitivity 63%  Specificity 77%  A cutoff ‘‘at-risk” score of 117 correctly classified (sensitivity) 78% of the poor outcomes (failed to reduce sick leave) and a cut-off score of 139 correctly classified 44% of those who failed to reduce their sick leave. For the same score levels 49% and 89% of those who succeeded in reducing their sick leave were correctly classified (specificity). |

**Table 3: GRADE assessing strength of the evidence for predicting absence (prognostic factors)**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  | **1** | **2** | **3** | **4** |  |
| **Prognostic factor** | **Number of participants / studies** | **Effect size** | **QUIPS ROB** | **Inconsistency** | **Indirectness** | **Imprecision** | **Strength of evidence** |
| Age\* | 28,251 participants  7 studies | Range: 0.54 -1.27 HR  0.9-0.97 OR  Significant association: 5 studies all indicating older age to be protective | Downgrade 1 as more than half have high ROB | Downgrade 1 estimates of effect vary with points either side of the line of no effect and heterogeneity between studies in prognostic factor definition | No concerns | No concerns | **Low** |
| Sex† | 7,219 participants  4 studies | Range: 0.84-1.59 HR  Significant association: 4 studies mixed direction | Downgrade 1 as more than half have high ROB | Downgrade 1 estimates of effect vary with points either side of the line of no effect and heterogeneity between studies in prognostic factor definition | No concerns | No concerns | **Low** |
| Recovery expectations | 3,019 participants  4 studies | Range: 0.23-2.32 HR  1.44-3,08 OR (from 1 study)  Significant association: 4 studies mixed direction | Downgrade 1 as more than half have moderate/high ROB | Downgrade 1 heterogeneity between studies in prognostic factor definition | No concerns | No concerns | **Low** |
| Previous absence | 7,107 participants  4 studies | Range: 0.91-1.50 HR  Significant association: 2 both different directions | Downgrade 1 as more than half have high ROB | Downgrade 1 estimates of effect vary with points either side of the line of no effect and heterogeneity between studies in prognostic factor definition | No concerns | No concerns | **Low** |
| Mental health ‡ | 1,691 participants  3 studies | Range: 0.83-4.64 OR  Significant association: 1 study | Downgrade 1 as more than half have high ROB | Downgrade 1 estimates of effect vary with points either side of the line of no effect and heterogeneity between studies in prognostic factor definition | No concerns | No concerns | **Low** |
| Physical work demands | 5,148 participants  5 studies | Range: 0.81–1.45 HR  Significant association: 2 studies mixed direction | Downgrade 1 as more than half have high ROB | Downgrade 1 estimates of effect vary with points either side of the line of no effect and heterogeneity between studies in prognostic factor definition | No concerns | No concerns | **Low** |
| Work culture§ | 3,028 participants  4 studies | Range:1.11-1.85 HR  Significant association: 4 studies | Downgrade 1 as more than half have moderate/high ROB | Downgrade 1 estimates of effect vary with points either side of the line of no effect and heterogeneity between studies in prognostic factor definition | No concerns | No concerns | **Low** |
| Pain‖ | 851 participants  4 studies | Range:0.96-1.17 HR  Significant association: 3 | Downgrade 1 as more than half have moderate/high ROB | Downgrade 1 estimates of effect vary with points either side of the line of no effect and heterogeneity between studies in prognostic factor definition | Downgrade 1  Westman et al 2008 include those who are not absent from work but do not present the results separately | No concerns | **Very low** |
| Function | 2,182 participants  5 studies | Range:0.56-2.32 HR  Significant association: 4 studies | Downgrade 1 as more than half have high ROB | Downgrade 1 estimates of effect vary with points either side of the line of no effect and heterogeneity between studies in prognostic factor definition | Downgrade 1  Westman et al 2008 include those who are not absent from work but do not present the results separately | No concerns | **Very low** |
| General health and quality of life | 787 participants  3 studies | Range: 0.90-1.60 HR  1.51-2.26 OR  Significant association: 2 | Downgrade 1 as more than half have high ROB | Downgrade 1 estimates of effect vary with points either side of the line of no effect and heterogeneity between studies in prognostic factor definition | No concerns | No concerns | **Low** |

QUIPS – Quality in Prognostic Studies, ROB – Risk of bias, HR – Hazard Ratio

\* 2 studies do not report data to calculate effect sizes (Shiels *et al*. 2004, Smith *et al*. 2014)

† 3 studies do not report data to calculate effect sizes (Shiels *et al*. 2004, Smith *et al*. 2014, Truchon *et al*. 2010)

1 study did not report data to calculate effect size (Westman *et al*. 2008)

§1 study did not report data to calculate effect size (Smith *et al*. 2014)

‖1 study did not report data to calculate effect size (Truchon *et al*. 2010)

Not able to include in the GRADE assessment due to wide heterogeneity: Other demographics; work schedule; specific work demands; work characteristics; other work variables; injury location; other health conditions reported.

**Table 4: GRADE assessing strength of the evidence for predicting absence (models)**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  | **1** | **2** | **3** | **4** |  |
| **Prognostic models** | **Number of participants / studies** | **Rating of performance\*** | **PROBAST ROB**† | **Inconsistency**‡ | **Indirectness** | **Imprecision** | **Strength of evidence** |
|  | 20,139/ 13 studies | c-statistic (AUC)  Range 0.6 – 0.88  Sensitivity range 63%-72%  Specificity  range Sp 64%-78%  Positive predictive value  Range 35%-60%  Negative predictive value range 54%-83% | No concerns | Downgrade 1 due to missing confidence intervals when reporting c-statistics | Downgrade 1  Westman et al 2008 include those who are not absent from work but do not present the results separately | No concerns | **Low** |

PROBAST - Prediction model Risk Of Bias ASsessment Tool – ROB Risk of Bias – AUC Area Under the Curve

\*c-statistic or AUC >0.7 would indicate a good/strong model

† Five of the 13 included studies had high or unclear risk of bias, as this did not meet the criteria for downgrading no concerns were reported here

‡ Three tudies reported confidence intervals (Dubois *et al* 2009, Steenstra *et al* 2015 & 2016)