Strengthen your business by good work design

Professor Niki Ellis
Workplace Health and Safety Queensland
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Newcastle Show – established 1902
As work and work environments change to meet the demands of the 21st century, comprehensive approaches are needed to address complex realities.

Total Worker Health website, NIOSH, CDC, Dec 2018
Traditional OHS: Injury prevention

Health Gains

Health Promotion
Promote health and well-being

Health Protection
Prevent harm

ORGANISATIONAL GAINS

Health promotion in the workplace

Improvements to productivity

Reduce losses

Work-related conditions

Non work-related conditions

Promote health and well-being

Prevent harm

Psycho-social environment

Physical environment
Integrated approach to WHS

- **HEALTH GAINS**
  - **HEALTH PROMOTION**
  - ORGANISATIONAL HEALTH AND SAFETY MANAGEMENT
  - **HEALTH PROTECTION**

- **ORGANISATIONAL GAINS**
  - IMPROVEMENTS TO PRODUCTIVITY
  - REDUCED LOSSES

- **SOCIAL CAPITAL GAINS**
  - REDUCED SOCIAL ISOLATION

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Ellis, OUP, 2001
Hypothesis of mechanism

Employees who feel that workplace hazards are ignored may be understandably unreceptive to employer advice about their activities during personal time.

Conversely, managers have blamed MSDs and CVD on worker obesity, smoking, and other personal risk factors. Combining the two sets of concerns may offer an equitable solution to this impasse by facilitating the sharing of responsibility between workers and employers.

WHS in the 21st century

AN EXPANDED VALUE CHAIN GOES BEYOND ABSENCE OF INJURY

Gains in health wellbeing, fitness for duty

Absence of illness or injury incidents

Organisational Health and Safety Strategic, integrated

Harm Minimisation Compliance, systems, culture

Illness/injury incidents

Loss Control

Gains in company performance

Cost minimisation

Slide courtesy of Anne-Marie Feyer
There is a relationship between health and injury

Illnesses are associated with...

- Increased risk of injury
- Prolonged hospitalisation & rehab
- Higher treatment costs
- Increased time off work due to treatment & rehab complications
- Higher risk of becoming permanently unable to work

Co-morbidities include:
asthma, chronic obstructive pulmonary disease, ischaemic heart disease, heart failure, diabetes mellitus, mental health condition (depression, bipolar, anxiety, schizophrenia), cancer diagnosis (lung, breast, colon, cervix, prostate), osteoarthritis

Source: Gribben & Wren, 2012
Presence of 1+ health conditions showed:

- 28% more claims
- 346% higher lump sum payments
- 59% higher medical treatment costs
- 39% more weekly compensation costs
- 59% more total ACC costs overall across all cost categories
- 10.7% of total ACC expenditure p.a. directly attributed to the presence of the most common co-morbidities ($276m NZD 2011)

Source: Gribben & Wren, 2012
In Victoria, workplaces with WHP as well as OHS had better safety cultures, not worse

<table>
<thead>
<tr>
<th>ATITUDES TOWARDS WORKPLACE HEALTH &amp; WELL-BEING</th>
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<tr>
<td>The workplace is a reasonable setting to promote health and well-being messages</td>
<td>62</td>
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<td>If looking for a new employer, you would target organisations that offer health &amp; well-being programs</td>
<td>5</td>
<td>52</td>
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<th>COMMUNICATION</th>
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<td>Providing workers with the opportunity to put forward their point of view</td>
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<td>Sharing information with workers</td>
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<td>Taking into account workers’ views</td>
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<th>HEALTH AND SAFETY MATTERS</th>
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<td>Continuously monitoring workplace health and safety</td>
<td>82</td>
<td>9</td>
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<tr>
<td>Alerting workers to hazards</td>
<td>70</td>
<td>9</td>
</tr>
<tr>
<td>Ensuring workers know how to perform safety tasks</td>
<td>70</td>
<td>9</td>
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<tr>
<td>Intervening if people don’t follow the correct safety procedure</td>
<td>70</td>
<td>9</td>
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<tr>
<td>Reinforcing that safety is the most important priority</td>
<td>70</td>
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<th>WORKPLACE SAFETY</th>
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<tr>
<td>Workplace has a HSR</td>
<td>7</td>
<td>96</td>
</tr>
<tr>
<td>Safety needs to improve greatly*</td>
<td>7</td>
<td>1</td>
</tr>
<tr>
<td>Safety will improve in the next 12 months</td>
<td>3</td>
<td>71</td>
</tr>
<tr>
<td>Management are “fully committed” to ensuring the incident that caused my illness/injury does not happen again^</td>
<td>4</td>
<td>63</td>
</tr>
<tr>
<td>Workers feel pressured to take short cuts “all the time” or “often”*</td>
<td>6</td>
<td>1</td>
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*Note: Lower results are favourable on this measure
^Note: This questions was only asked of those who had been injured or became ill at work
Benefits of integrated approach

Business rationale:

• Increase worker productivity
• Meet new social expectation.

Source: Deloitte, 2018
Let’s say you are a medium-sized logistics company

• Your LTIFR is OK, but it has plateaued

• Keeping it there is becoming a problem – people are becoming complacent

• Your safety program is pretty good. The drivers and pickers are ageing; you do health checks for them, and you know the results are not good, but the mainly middle-aged men are not really interested in the workshops and pamphlets on diet, exercise and quit smoking and sensible drinking

• Your WHS is largely oriented to the warehouse and trucks, you would like to do more for the admin staff

• The organisation has just been rocked by a suicide...

What do you do?
Evidence based model for an integrated approach

INTERVENTION TARGETS FOR WORKER HEALTH AND WELLBEING

Source: NIH and CDC workshop, 2010, Am J PH
An integrated approach to work-related stress could include:

• Implementing policies for more flexibility and control over their work and schedules for workers, as well as opportunities to identify and eliminate root causes of stress

• Providing training for supervisors on approaches to reducing stressful working conditions

• Providing skill-building interventions for stress reduction for all workers and providing access to Employee Assistance Programs.

Source: https://www.cdc.gov/niosh/twh/default.html
An integrated approach to MSDs could include:

- Reorganising or redesigning the work to minimize repetitive movement and awkward postures
- Providing ergonomic consultations to workers to improve job and workstation design and interfacing, along with ergonomic training and opportunities for workers to participate in design efforts
- Evaluating the age profile and health needs of the workforce to provide education on self-management strategies (including preventive exercise) for arthritis or other musculoskeletal conditions.

Source: https://www.cdc.gov/niosh/twh/default.html
Work health and wellbeing toolkit
Strengthen your business
As work and work environments change to meet the demands of the 21st century, comprehensive approaches are needed to address complex realities.

Total Worker Health website, NIOSH, CDC, Dec 2018
Six megatrends important for WHS

1. The extended reach of automated systems and robotics
2. Rising issue of workplace stress and mental health issues
3. Increasing screen time, sedentary behaviour and chronic illness
4. Blurring the boundaries between work and home
5. The gig and entrepreneurial economy
6. An ageing workforce

Source: Workplace Safety Futures, Safe Work Australia, Data 61, CSIRO, 2018
Scenarios for Australia’s workforce in 2037

1. Business as usual
2. Enabled
3. Restructured
4. Transformed

Source: Workplace Safety Futures
Scenario 1. Business as usual

In this scenario:

➤ Automated systems have had limited and patchy impact
➤ Gig economy not disrupted models of employment significantly.

BUT this does not take into account disruption occurring now because of the rise of mental health and ageing workforce.
Productivity Commission Inquiry: Social and Economic Benefits of Improving Mental Health, Oct 2018

- 4 million Australians experienced common mental illness 2014–15
- Single largest contributor to years lived with illness.

Figure 1  Improvements in mental health can benefit both individuals and the wider community

- Interventions tailored to individual needs & preferences
- Flow-on effects of good mental health

- Personal history
  - Trauma
  - Life events
  - Social environment
  - Genetics
  - Physical illness
  - Illness
  - Substance abuse

- Areas in which interventions can improve mental health
  - Education
  - Housing
  - Employment support
  - Work environment
  - Income support
  - Health care
  - Arts, music & culture
  - Sports & activities

- Community investment in supporting mental health

- Groups of the community that benefit
  - Family, friends & carers
  - Governments
  - Employers & industry associations
  - Local community groups
  - Non-government organisations

- Individual contributions to wider community

Source: Productivity Commission issues paper, Jan 2019
Scenario 2: Enabled

Work is changed significantly by digital and other technologies which automate a large number previously performed by humans, but employment models are roughly the same.
Historically automation has helped our cause

Source: Australian Workers’ Compensation Statistics 2015/16, Safe Work Australia
In the future IoT can help eg: Daqri AR

Augmented reality solution:

- Glasses
- Scan of the environment and models
- Central computer & supervisor.

Slide courtesy of Monica Schelessinger
But it can go badly wrong

"It strikes me that having spent nearly 70 years focusing on technical systems, we should be seeking to explore the human and ecology systems more. I think it is a conversation where we absolutely have to .... (put) those pieces back together again, the way people imagined that we should have started in the 40s..."
OECD warning of decline in quality of work with automation

➤ 14% of jobs at risk of automation, but new ones will emerge

➤ “There are concerns about the quality of some of the emerging new jobs and, without immediate action, labour market disparities may grow”

Source: Warning over automation jobs risk, SMH 25 April, 2019
Work design

Source: Safe Work Australia, Good Work Design Handbook
Scenario 3: Restructured

➤ Technology has not had the predicted impact

➤ However employment changed – most workers have multiple employers, freelancing is the norm, small start-ups generate new jobs.
maladies that attack stone-cutters, quarrymen and other such workers...they often breathe in rough, sharp, jagged splinters ...hence they are usually troubled with cough and some of them contract asthmatic affections and become consumptive”

– Ramazzini 1713
Historical and emerging workplaces affected by silica exposure since the 1930 Johannesburg conference on Silicosis

Factors leading to slow uptake of risk management in the construction industry:

1. A highly mobile and temporary workforce is involved.
2. Construction sites are temporary.
3. Construction firms tend to have five or fewer employees.
4. Silica content of building materials tends to vary, making it difficult to identify both the risk and who’s at risk.

Source: Suave, American Journal of Industrial Medicine, 2015
Systems thinking

- Workers’ compensation
- Life insurance
- CTP
- Disability support
- Superannuation
- Others
- Vocational rehabilitation providers
- GPs and other health care
- Employers
Health literacy theory and practice: potential to be used to empower workers

www.ophelia.net.au
Scenario 4: Transformed

Technology and new employment models have had transformative impact on WHS:

➤ Peer to peer business models common, most people earn through freelancing and gig work

➤ Human roles are supervising automated systems, and tasks that focus on creativity, empathy and lateral thinking

➤ Many organisations are virtual networks

➤ Mental health and co-bot issues exist, but confounded by changed employment structure.
Policy issues in WHS and workers compensation

➤ WHS laws in the gig economy? Especially allocation of responsibilities

➤ Collection and use of relevant data?

➤ Provision of information to gig workers?

➤ Adequacy of control measures to address use of robots in workplaces?

➤ Obligations of designers, suppliers etc in advancing autonomous systems, e.g. self-programming autonomous systems?

➤ Leveraging new and emerging technologies to improve WHS and workers compensation, especially mental health.

Source: Workplace Safety Futures, Safe Work Australia, Data 61, CSIRO, 2018
Conclusion

➤ The rise of mental illness and the ageing workforce are already disrupting WHS
  ▪ going beyond the obligation of a PCBU to provide a safe and healthy working environment, a shared responsibility for WHS is emerging.

➤ The integrated approach requires a more strategic approach
  ▪ the Work, Health and Well-being tool kit provides guidance on how to undertake such planning.

Continued...
Conclusion contd...

➤ Automation is posing a threat and an opportunity to WHS
  ▪ we are being urged by academics and policy makers to do more to protect/improve the quality of work
  ▪ design of good work is a key issue.

➤ Industrial relationships are altered
  ▪ and the gig economy is likely to see this persist
  ▪ we need to rethink how we deliver WHS
  ▪ enabled, direct to worker solutions likely to become more important
  ▪ we are likely to work in partnerships for collective action.