Human Factors Program
Metropolitan Pilot

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Nathan Farrow – Safer Care Victoria
Overview

• How the course came about
• Why learn about Human Factors
• Overview of the VMIA Human Factors Course (pilot)
• Features of the course
• Course evaluation
• Project examples
• Next steps
How the course came about
Why Learn About Human Factors?

- Fast emerging field in healthcare
- Strong reliance on human controls
- Lack of strong expertise
- Human factors issues in incidents
- Next evolution of improvement

If you AREN’T managing human factors issues, you AREN’T managing your risks!
Course Overview

Day 1
Introduction to Human Factors Concepts

Day 2
Human Factors Tools and Approaches – Part I

Day 3
Human Factors Tools and Approaches – Part II

Day 4
Human Factors Tools and Approaches – Part III
Case Study: Planning

Day 5
Case Study: Execution

Day 6
Case Study: Review

Introduction and Underpinning Concepts

Topics of Interest

Project
## Course content

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<th>Day 1</th>
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<tr>
<td>Course introduction</td>
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<tr>
<td>Introduction to human factors</td>
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<td>Underpinning concepts</td>
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<td>Tools overview</td>
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<th>Days 2 – 4</th>
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<tr>
<td>Usability</td>
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<td>Reliability and usability of procedures</td>
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<td>Human Factors Integration (HFI)</td>
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<td>Maintenance errors</td>
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<td>Identifying human failures / Non-technical skills</td>
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<td>Competence assurance</td>
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<td>Human factors in investigations</td>
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<td>Safety critical communications</td>
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<td>Fatigue</td>
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<td>Safety culture</td>
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<td>Alarm handling</td>
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<td>Organisational change and transition</td>
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<th>Days 4 – 6</th>
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<td>Application of practical skills</td>
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<td>A small human factors project to complete</td>
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Underpinning knowledge

- Systems-thinking
- Culture
- Capabilities & limitations
- Human factors
- User-centred design
- Underlying causes
- Misconceptions
- Human error
Features of the Course

- Shared language and peer group
- Provides confidence on what is (and is not) HF
- Practical and useful tools and guidance
- A breadth of topics
- Practical project
- Drop-in support
- Engaging
- Informed by other industries, but tailored to healthcare
- Provides access to HF knowledge and skills
Course evaluation

- Kirkpatrick’s four level evaluation model (Kirkpatrick and Kirkpatrick, 2007)
  - Level 1 – Reaction (basic course evaluation)
  - Level 2 – Learning
  - Level 3 – Behaviour
  - Level 4 – Outcomes
- Data collected during the course, on completion and at 6, 12 and 24 months after the course.
- Questionnaires, pre-post course knowledge evaluations and interviews
- Ethics approval
- Inform ongoing course adaptation and improvement
- Publication
Evaluation findings - Level 1 Participant reaction

**Confidence in understanding Human Factors topics presented**

- **Overall**: 8.5
- **Day 1**: 5.5
- **Day 2**: 7.0
- **Day 3**: 8.0
- **Day 4**: 9.0
- **Day 6**: 8.5

Comparison: BEFORE the Day (blue) vs. END of the Day (red)

**Effectiveness of course facilitators**

- Thomas Loveday: Very effective
- Stuart Marshall: Very effective
- Nathan Farrow: Very effective
- Stuart Dickinson: Very effective

**How could this course be improved? Analysis of themes**

- **Curriculum content/...**: 14
- **Course timing**: 6
- **Venue issues**: 4
- **Course administration**: 8
- **Positive feedback**: 10
Evaluation findings - Level 2 Pre-post knowledge tests

- Pre-course
- Post-course

Mean response accuracy:

Pre-course:
- 0 (43%)
- 0 (57%)

Post-course:
- 0 (21%)
- 0 (79%)
Next steps
Thank you

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