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Exploring an Innovative approach to Preventing Skills Decay in Remote and Rural Communities

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Preventing Skills Decay in Remote and Rural Communities

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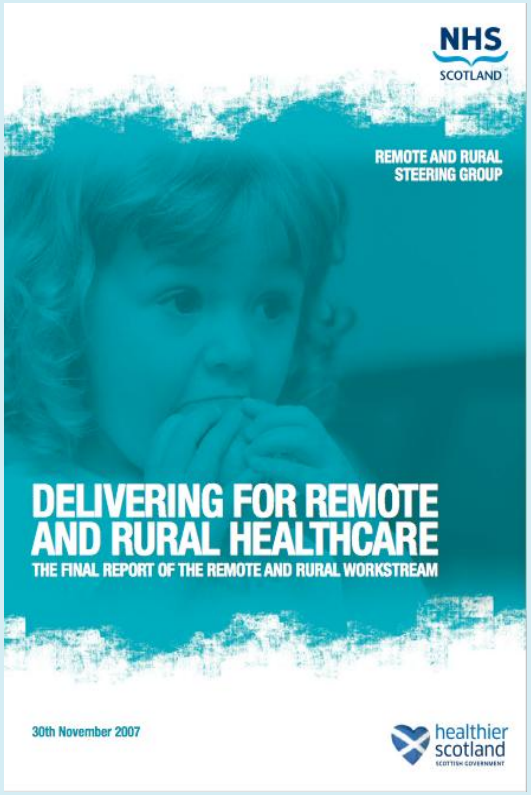
At the end of the workshop participants will be able to:

- Identify problems for health care practitioners in preventing skills decay in remote and rural practices
- Participate in use of “rip and mix” tool to develop potential innovative solutions

Plan of Workshop

- Welcome, Plan and Background Context
- Small group work 1
  - Identifying challenges for health care practitioners in preventing skill decay in remote and rural practice
- Small group work 2
  - Rip and Mix approach to developing solutions
- Feedback from groups

Remote and Rural Practice



- Suicide rates
- Incidence of alcohol related disease
- Accidents
- Palliative care
- Seasonal population changes

What is skill decay?

"Loss or deterioration of trained or acquired skills or knowledge after periods of non-use"

Arthur W., Bennett W., Factors that influence skill decay and retention Human Performance 1998, 11 (1) 57-101

Influences on Skill Decay

Major Factors

- **Degree of overlearning**
- **Task characteristics**
- Length of retention interval
- Methods of testing
- Conditions of retrieval
- Instructional strategies

Skill Decay and Over-Learning

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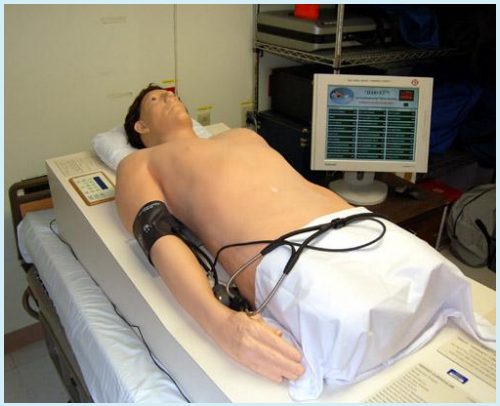
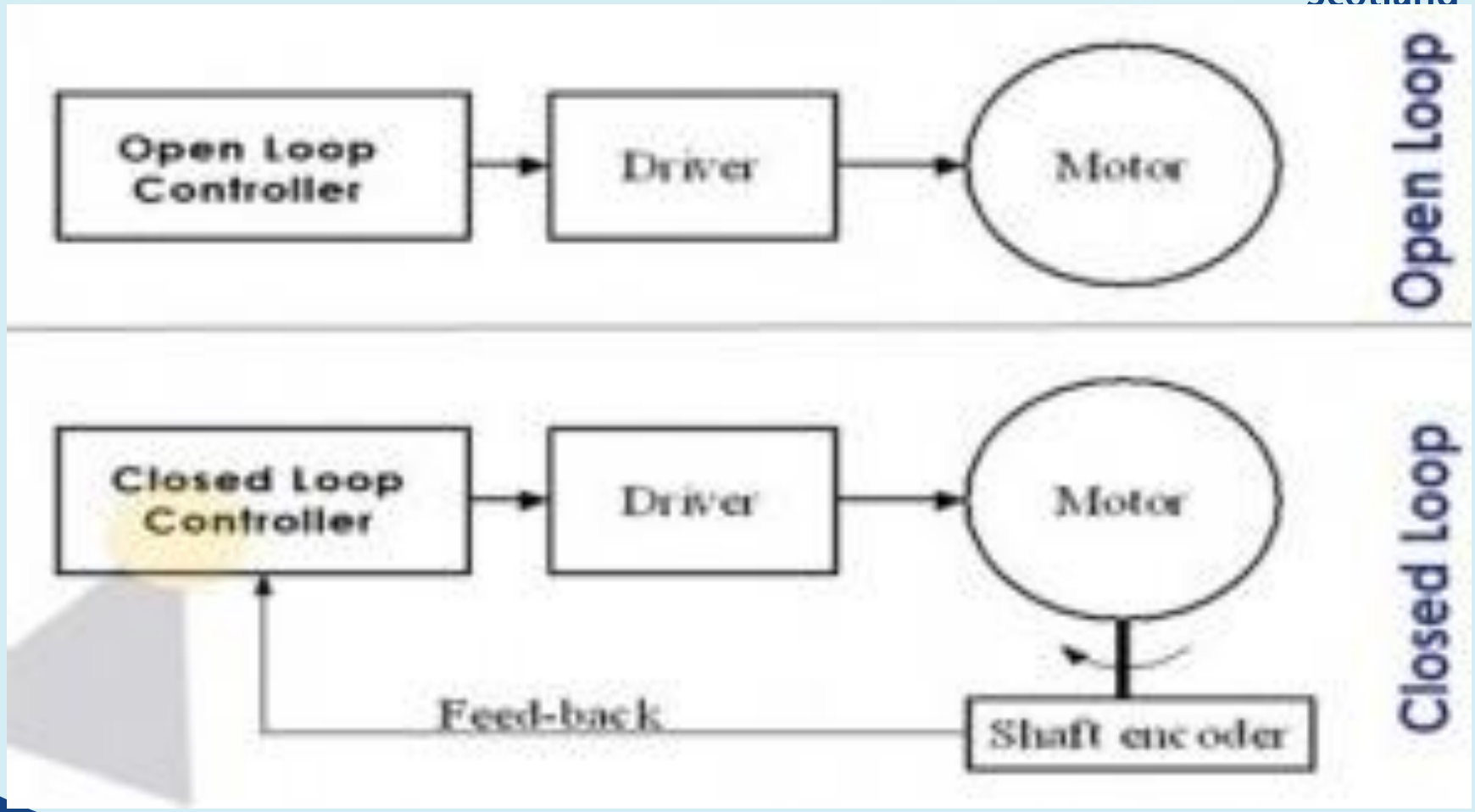
- Role of Deliberate Practice
  - Principles of acquisition of expertise
  - Learner engagement in
    - Repetitive performance
    - Rigorous skills assessment
    - Specific feedback
    - Enhanced skills performance

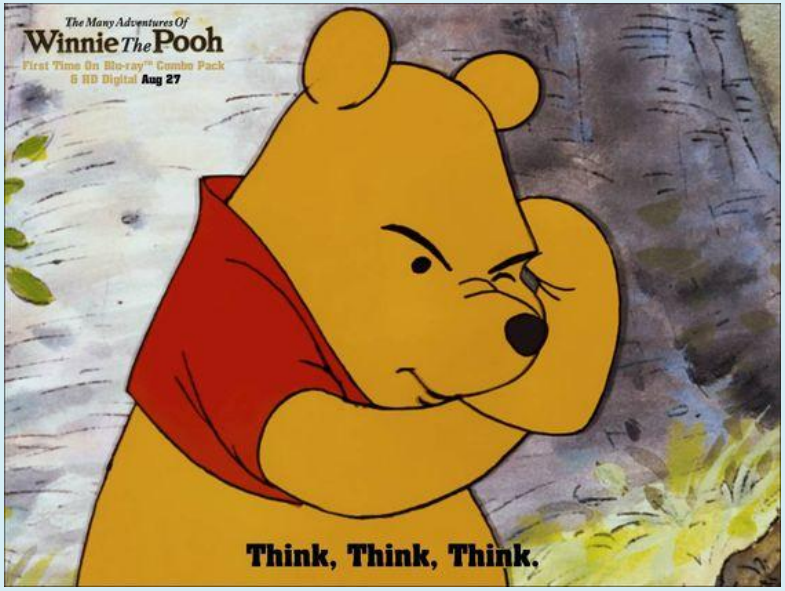
Ericsson 2004, Issenberg 2005,



Skill Decay
Task Characteristics



Skill Decay
Task Characteristics



VS

Cognitive skills

Physical Skills

Skill Decay
Task Characteristics

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VS

Prevention of Skill Decay

- Cognitive diagnostic skills
  - (Weaver, Newman-Toker, Rosen 2012)
- Refresher interventions (RI)
  - (Kluge and Frank 2014)
- Role of symbolic rehearsal and retentivity
  - (Kluge, Frank, Maafi, Kuzmanovska 2016)
- Spaced learning
  - (Price, Kerfoot 2015)

Benefits of Simulation in Prevention of Skill Decay

- **Benefits to Patients**
  - Risks of harm to patients avoided
  - Undesired interference is reduced
- **Benefits to Learners**
  - Skills can be practised repeatedly (simple to complex)
  - Training can be tailored to individuals and teams
  - Can provide effective feedback to individuals and teams and organisations
- **Benefits to Health Care Organisations**
  - ***Tasks/scenarios can be created to demand and aligned to policy***
  - ***Retention and accuracy are increased***
  - Provide “pre-trained” novice
  - Transfer of training from classroom to real situation is enhanced
  - Systems redesign
  - Standards against which to evaluate performance and diagnose educational needs are enhanced

Maran and Glavin 2004, Issenberg 2005, Ker and Bradley 2014

For Further Information Contact:

Prevention of Skill Decay

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General Medical Council

Regulating doctors, ensuring good medical practice

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- Overview
- Undergraduate education
- Medical students
- Information for medical schools
- Bodies awarding UK medical degrees
- Standards and guidance
- Tomorrow's Doctors
- Tomorrow's Doctors online (2009)
- Contents
- Foreword
- Introduction
- Outcomes for graduates
- Standards: teaching, learning and assessment
- Appendices

You are here: Home > Education and training > Undergraduate education > Standards and guidance > Tomorrow's Doctors > Tomorrow's Doctors online (2009) > Appendices > **Appendix 1: Practical procedures for graduates**

Tomorrow's Doctors: Appendix 1 - Practical procedures for graduates

Diagnostic procedures

Procedure	Description in lay terms
1. Measuring body temperature	... using an appropriate recording device.
2. Measuring pulse rate and blood pressure	... using manual techniques and automatic electronic devices.
3. Transcutaneous monitoring of oxygen saturation	... and reading readings from, an electronic device which measures the amount of oxygen in the patient's blood.
4. Venepuncture	Inserting a needle into a patient's vein to take a sample of blood for testing, or to give an injection into the vein.
5. Managing blood samples correctly	Making sure that blood samples are placed in the correct containers, and that these are labelled correctly and sent to the laboratory promptly and in the correct way. Taking measures to prevent spilling and contamination.
6. Taking blood cultures	Taking samples of venous blood to test for the growth of infectious organisms in the blood. Requires special blood containers and laboratory procedures.
7. Measuring blood glucose	Measuring the concentration of glucose in the patient's blood at the bedside, using appropriate equipment and interpreting the results.
8. Managing an electrocardiograph (ECG) monitor	Setting up a continuous recording of the electrical activity of the heart. Ensuring

Be able to perform a range of 32 procedures…..

'safely and effectively'

McLeod et al 2014

BASICS Scotland
Tele-education – Skills Training

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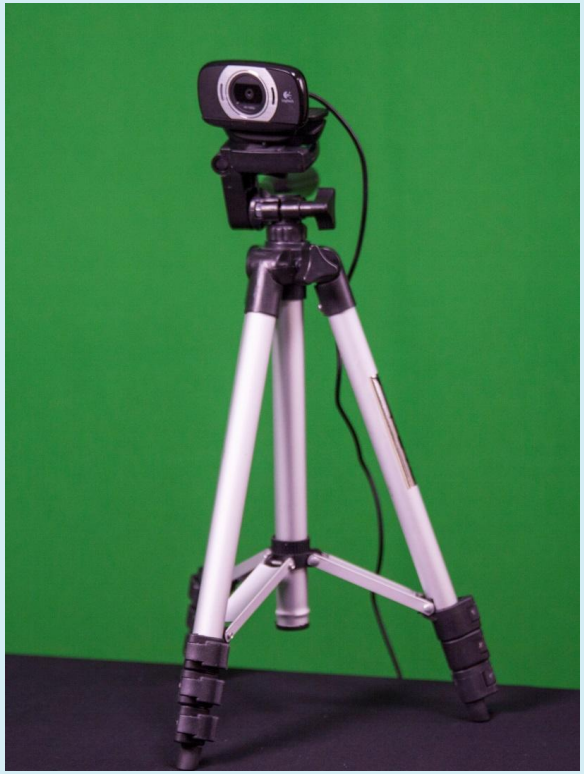


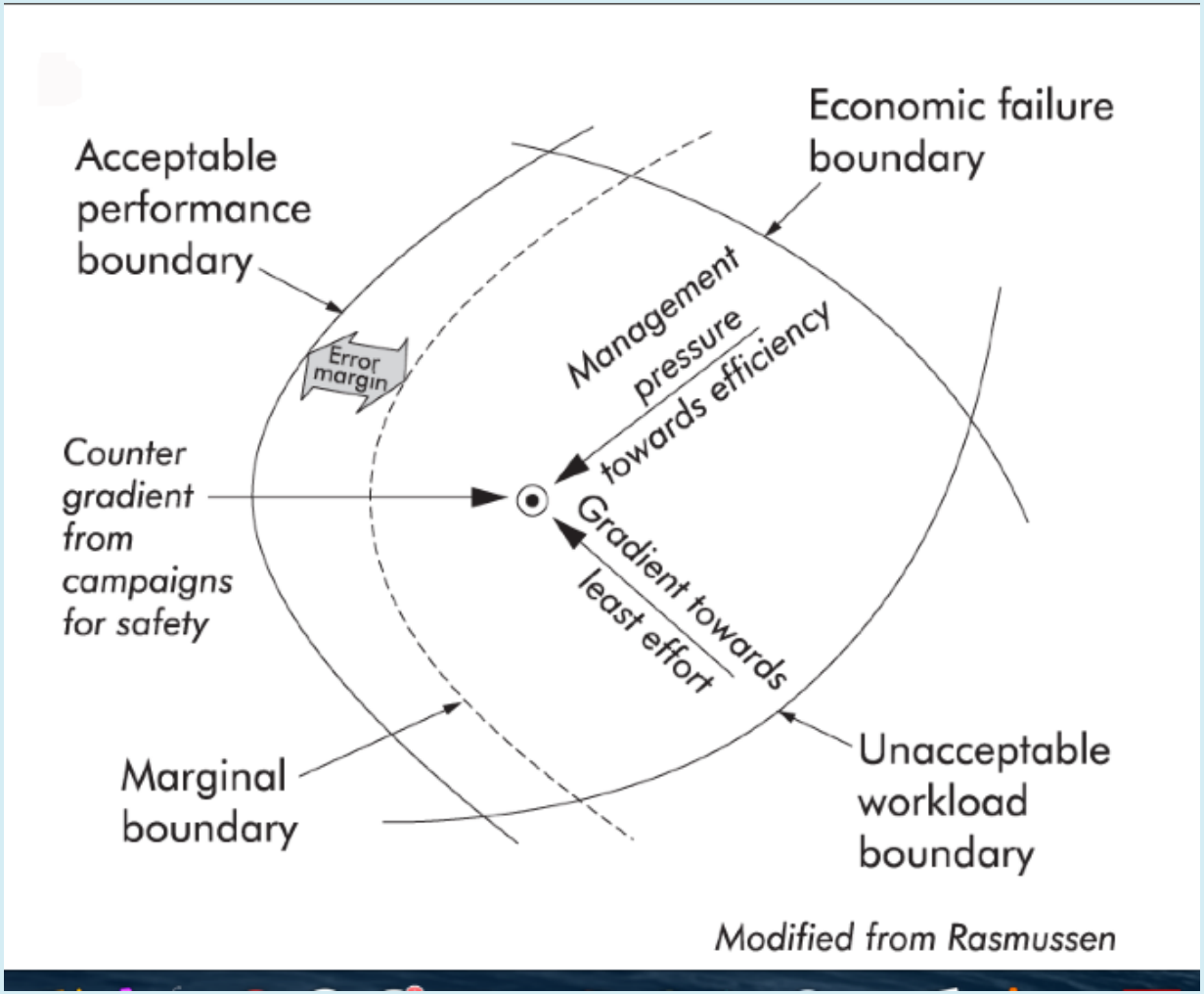
Recent Analysis

- < 50% do not take part in live sessions
  - Due to timing
- Course uptake is much greater than on-line course by a factor of 50
- Accessing recordings
  - average of 1.5 accesses per recording
  - 58% access after 7pm.

Results & Benefits

- 775 Places since 2011
- 49 Skills
- 50 + Sandpiper Bag Checks
- 2 nights accommodation, 2 days locum, travel = Saving - £920,000

Resilience in the System



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Prevention of Skill Decay in Remote and Rural Setting

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Figures based on completed evaluation forms	2010	2011	2012	2013	2014
Total Number of Evaluation Forms Completed	498	442	150	276	452
Allied Health Professionals	1%	6%	8%	6%	4%
Community	7%	17%	9%	17%	21%
Dentistry	4%	3%	0%	3%	1%
Emergency Services	14%	7%	10%	7%	5%
General Practitioners	5%	2%	1%	2%	7%
Healthcare Science	0%	0%	0%	0%	0%
Medical	4%	3%	0%	3%	5%
Nursing & Midwifery	40%	31%	39%	31%	25%
Information Not Completed	25%	31%	33%	31%	32%

Key Challenges to Preventing Skills Decay in Remote and Rural Settings

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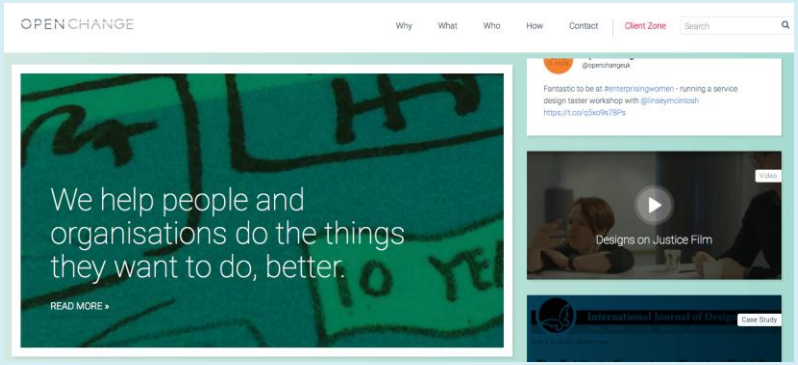
- Frequency of visits of mobile unit
- Coordinating initiatives
- Release of trainers to develop and deliver a programme of training
- Release of health professionals to attend training
- Health professionals attending training in own time due to financial constraints on budgets

Rip and Mix Method

- Apply lateral thinking to problem areas in your professional practice
- Enables your team to think about how existing issues can be transformed



www.openchange.co.uk

Rip and Mix Method

- Analyse own problem/challenge
- Take pleasurable or successful product/service
- Analyse
  - Its function
  - The stakeholders
  - How it makes users feel
- Develop new product service

	Pleasurable service /product	Painful product/service	New product or service
Product or service	Bingo	BLS Skill decay on hillside	Bingo BLS in the wilds App
Function	First to complete a line of numbers to win a prize	CPR performance to guidelines/contacting help	Provide algorithm based on location/available communication /resources. Create own winning line Algorithm
Stakeholders	Caller of numbers players in game	Patient /practitioner/SAS	All HCPS in R and R and public
Infrastructure/ resources	Bingo Cards/pens/ audio system /venue/prizes	No access to bag or face mask No access to defib / limited or no communication signal	App algorithm Experts in IT education BLS and R and R to write and update
Physical form or steps/components of service	Advertising/ multiple quick games	Physical resilience to carry out prolonged CPR	Linked to BLS training and R and R training
Emotional	Enthusiasm feeing of	Fear of failure and of	Builds confidence

Small Group Work 1

- What additional challenges/problems do you face in your practice in preventing skills decay?
- Analyse this problem using the headings provided in column 2 of the “Rip and Mix” tool

Plan of Workshop

- Welcome, Plan and Background Context
- Small group work 1
  - Identifying any additional challenges for health care practitioners in preventing skill decay
  - Complete Column 2 of rip and mix sheet
- Small group work 2
  - “Rip and mix” approach to developing solutions Columns 1+3
- Feedback from groups

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