

# Emergency Department Workforce Research Project - Workforce Planning Tool

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# Project Purpose

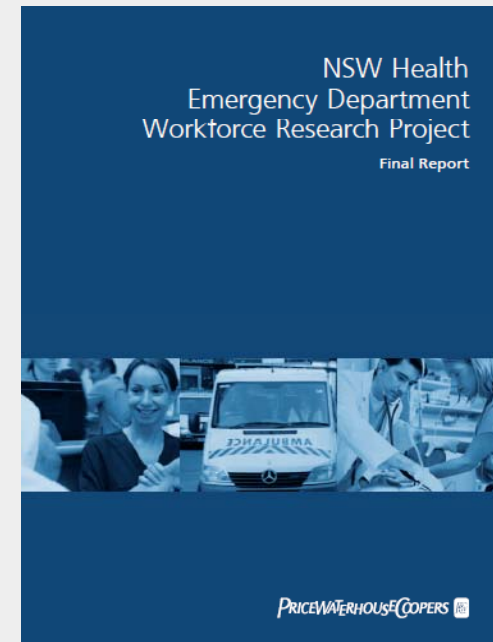
To determine the best use of Emergency Department staff skills required to improve the patient journey and maximise the safety, quality and efficiency in Emergency Departments

## Distinctive workforce planning features

1. Incorporates models of care into skill mix planning
2. Ground up planning process
3. Generic, multidisciplinary approach to workforce skill mix

# Development of Evidence Base

- ED Workforce Reference Group
- Partnership with PwC
- Academic literature review
- Diagnostic Phase – 13x2 day site visits; structured interviews, activity mapping, data collection on 4 domains; national and international consultations
- Solutions Design Phase: design of systemic variation; development of scenario groups mapped to Models of Care; principles and guidelines from literature



Emergency Department  
Workforce Research Project  
[http://www.health.nsw.gov.au/pubs/2010/pdf/ed\\_workforce\\_research.pdf](http://www.health.nsw.gov.au/pubs/2010/pdf/ed_workforce_research.pdf)

# Findings

- Highly interdependent workforce and complex activities
- Scope to use time of highly skilled staff better
- Similar growth demands internationally
- Similar development of Models of Care
- Useful Principles and Guidelines
- Scenario Groups received strong support – “Yes we are different”

# 1. Incorporating Models of Care

- **Data analysis and consultation revealed high level of variation among EDs.**
- **Three ED drivers of systematic variation were found:**
  - Remoteness - defined according to the Australian Standard Geographical Classification
  - Activity
  - Patient Profile
- **Further testing confirmed**
  - Indicators are interdependent
  - Socioeconomic index - same result as remoteness

# Developing indicators for drivers

## 1. Remoteness

- ASGC-RA1: Metropolitan
- ASGC-RA2: Rural

## 2. Activity

- Low activity (<25,000)
- Moderate activity (25,000-50,000)
- High activity (>50,000)

## 3. Complexity

# Developing indicator for complexity

## Step 1: Identification of variables for analysis

- Literature Scan –informed selection of variables for analysis through a Principal Component Analysis (PCA). Several measures not available in data.

## Step 2 & 3: Defining and standardisation of the variables: – Proportion of **aged; paediatric; triage 1,2,3; ambulance arrival; admissions; and injury**

## Step 4: Identifying the principal components

Principal component analysis(PCA) found that the data items which explain most of the other variables are:

ATS categories 1, 2, 3

Mode of arrival

Age >70 yrs, >55 yrs indigenous groups

Admission Rate

Injury

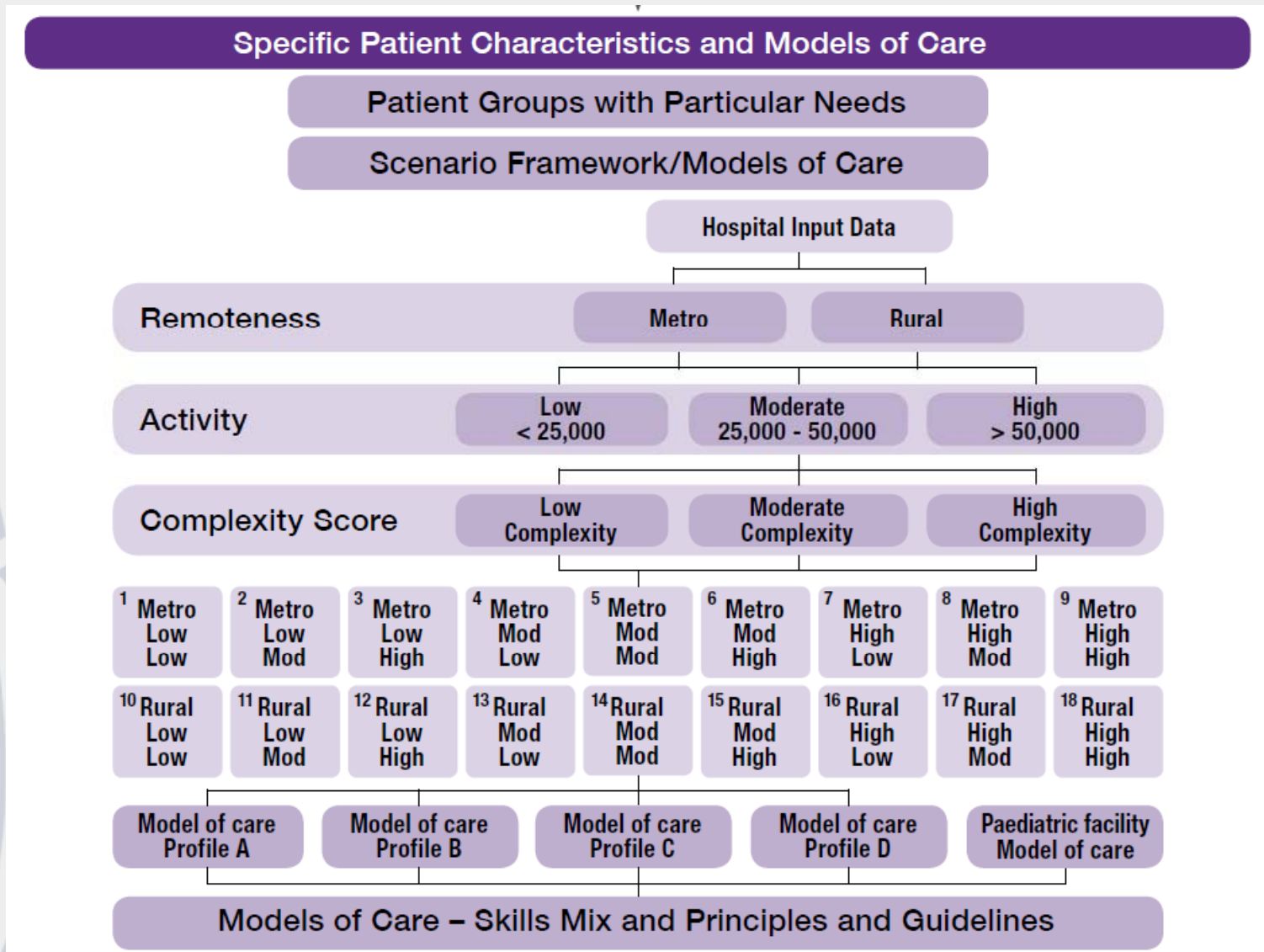
Paediatrics Presentations

## Step 5: Calculating a complexity score - Using the calculated PCA scores with individual ED data scores calculated and attributed to each ED with available data

## Step 6: Developing a range - The complexity scores were normally distributed

- 0.5 s.d. was used to segment the scores into bands of Low, Moderate & High

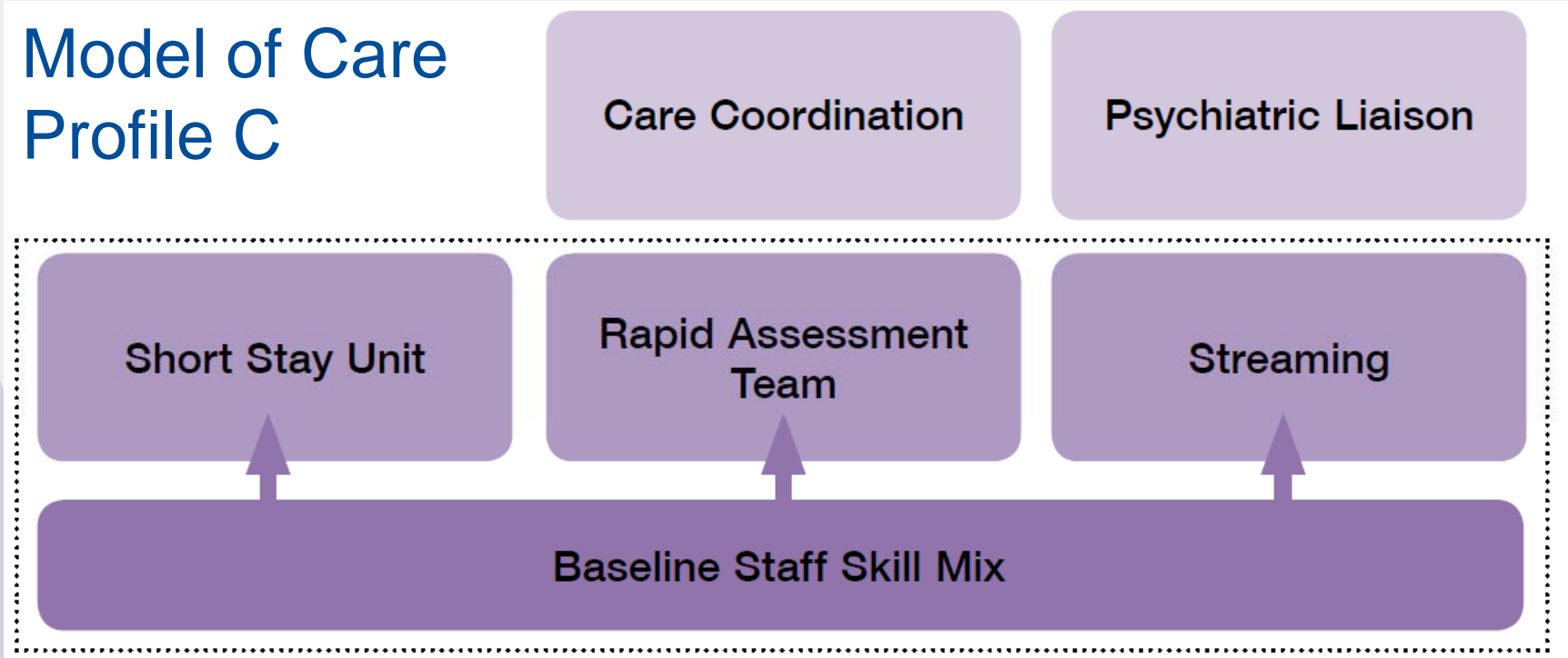
# Models of Care Framework





# Model of Care Profile - example

## Model of Care Profile C



Blacktown, Calvary Mater, Canterbury, Concord, Fairfield, Hornsby/Ku-ring-gai, Monavale, Mt Druitt, Shellharbour, Bankstown Lidcombe, PoW, St Vincents, Sutherland, Tweed Heads, Albury, Dubbo, Orange, Shoalhaven, Coffs Harbour, Lismore, Port Macquarie, Wagga Wagga



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# Model of Care Staff Skill Mix

Rapid Assessment  
Team

- Baseline Staff Skill Mix Requirements
  - Eg. Advanced clinical skills, ability to make prompt decisions, skills and recognised training to order and interpret diagnostic test
- Staffing Options
  - **Essential:**
    - Experienced medical staff (eg Emergency Medicine Specialist, CMO, Senior Registrar, GP) or Nurse Practitioner, or experienced Emergency RN operating according to standing orders
    - Experienced triage Nurse
  - **Optional:**
    - Support from junior medical staff (eg resident, junior registrar or intern)

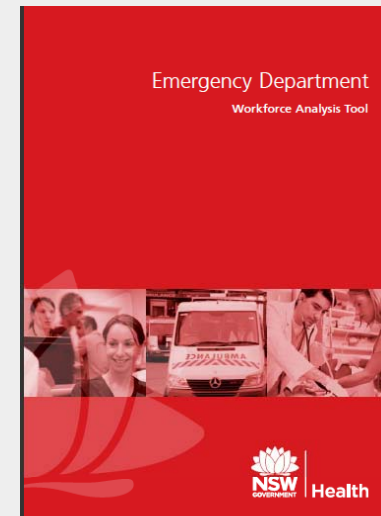
## 2. Applying localised planning process – the ED Workforce Analysis Tool

Multidisciplinary ED workforce planning process that:

- Allows a structured dialogue about skill mix
- Is supported by an evidence base
- Recognises unique ED characteristics
- Applies the Principles and Guidelines from the research
- Explores strategies to address gaps.

Is not:

- A workload tool
- A single dimensional formula



Emergency Department  
Workforce Analysis Tool

[http://www.health.nsw.gov.au/pubs/2010/pdf/EDWRP\\_EDWAT\\_091110.pdf](http://www.health.nsw.gov.au/pubs/2010/pdf/EDWRP_EDWAT_091110.pdf)



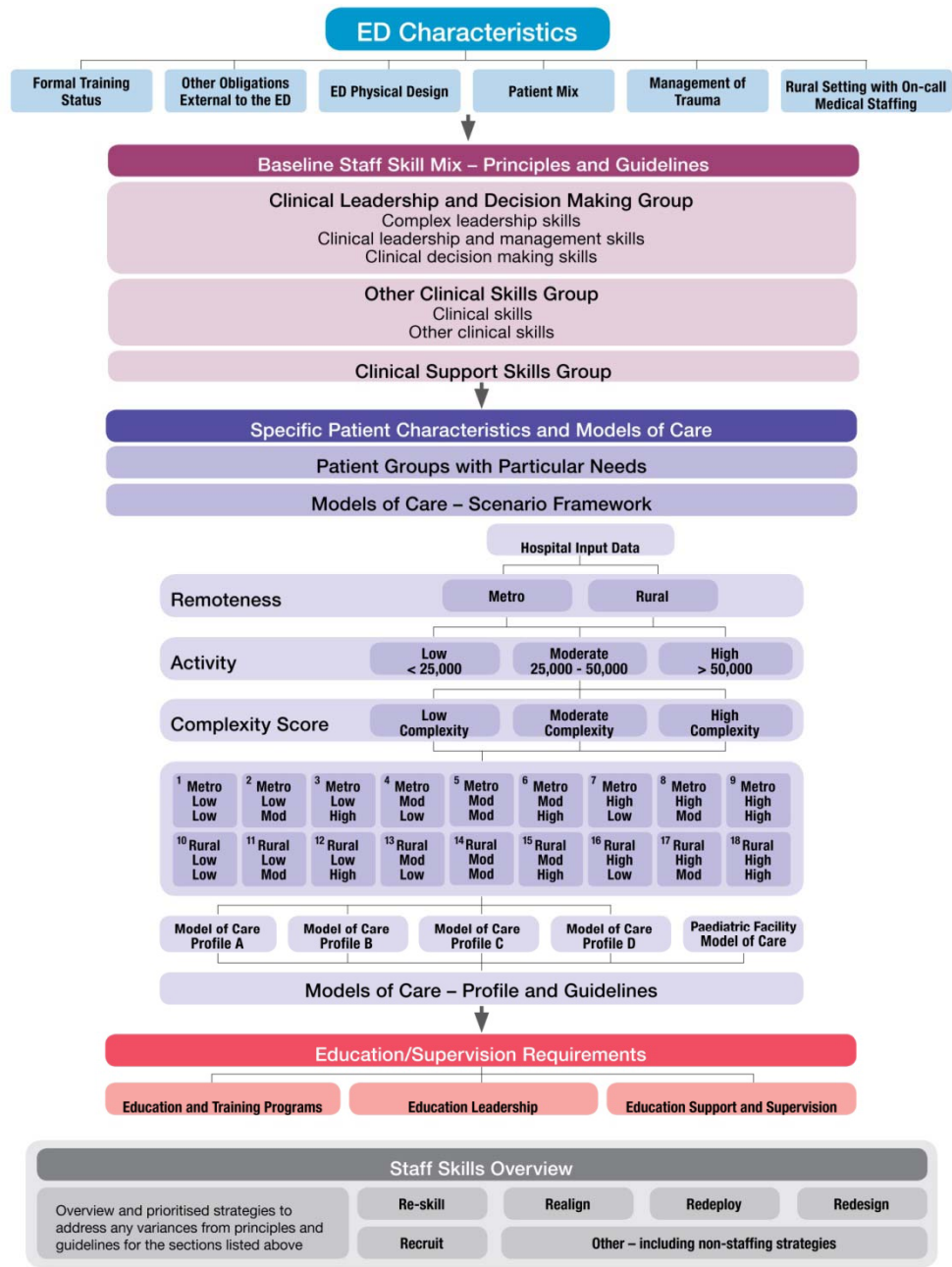
# Workshop Features

Duration/Location: 3 hr workshop conducted on site

Participants: ED Director, Nurse Manager, Nurse Unit Manager, Senior ED staff such Director of Emergency Medicine Training, Clinical Nurse Consultants, Stream Managers, Area or Facility staff responsible for workforce

Pre- Workshop: Review and read document  
Data preparation for ED Characteristics section

During Workshop: Discussion amongst group to consider the application of the guidelines at the particular site.



# Multidisciplinary ED Workforce Planning Process

### 3. Baseline Staff Skill Mix

– Non discipline-specific framework

#### Leadership and Decision Making Group

Complex leadership skills  
Clinical leadership and management skills  
Clinical decision making skills

#### Other Clinical Skills

Clinical Skills  
Other Clinical Skills

#### Clinical Support Group

\*Adapted from British Association of Emergency Medicine



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# Strategies

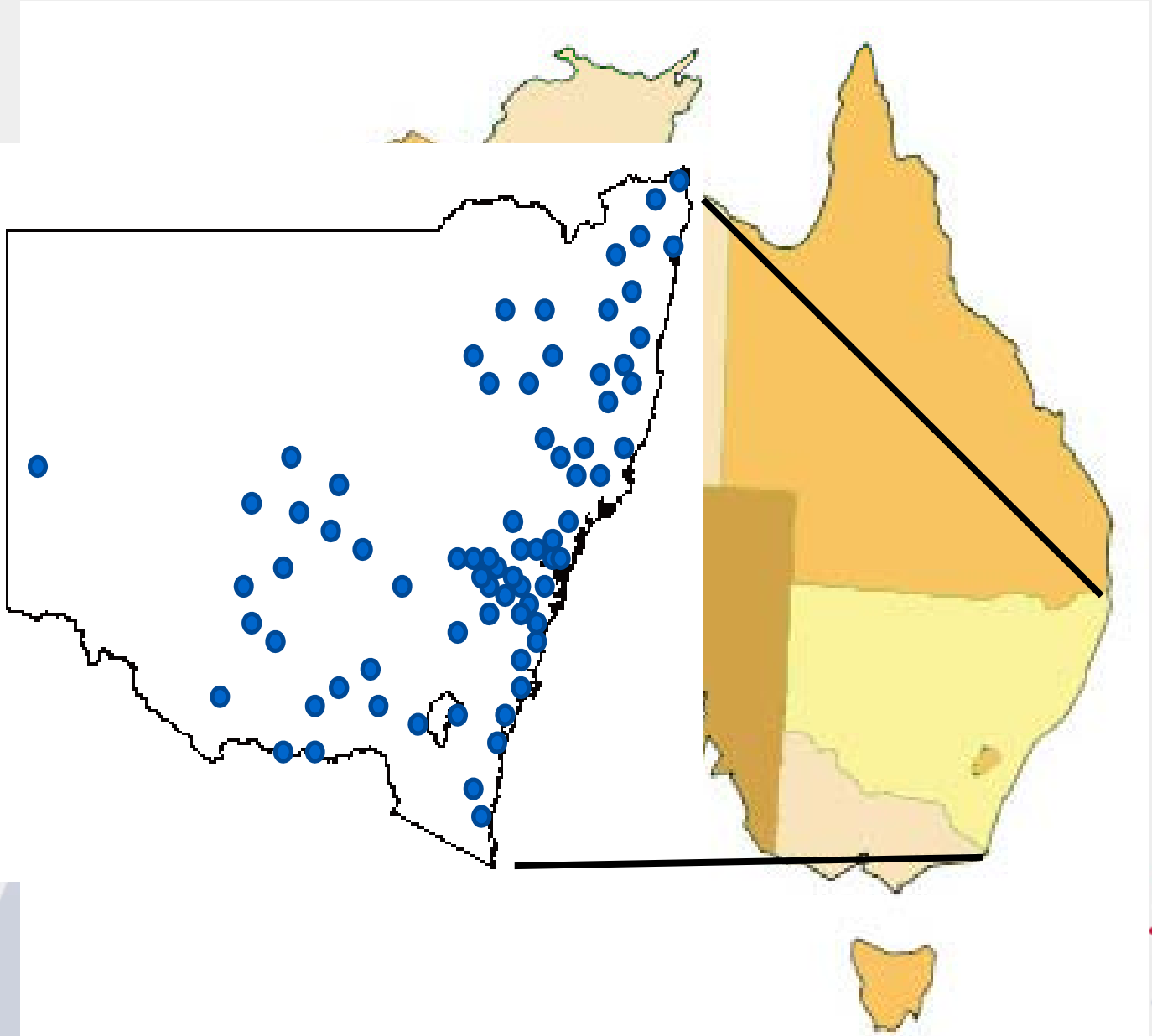
Strategies to address any variances from principles and guidelines.

Strategy	Definition
Re-skill	Existing staff
Realign	The current use of staff eg change rosters
Redeploy	From other internal or external areas to the ED
Redesign	The service model or MoC to suit skill-mix, or design a new workforce role.
Recruit	To fill staff gaps not able to be covered by any of the above.
Other	

# Implementation

Description	Total
Total ED NSW role delineation levels 3-6	87
Workshops Commenced	November 2011
Workshops completed to date	81 (92%)
No. Rural Workshops Completed	49 of 52
No. Metropolitan Workshops Completed	32 of 35
Whole of Local Health Districts	12 of 16
ED with Greatest No. Presentations	63,941 p.a.
ED with Smallest No. Presentations	3,360 p.a.





Summary			
Meets ED skills mix guideline?	Yes	Partial X	No
Describe areas of variance to guidelines:			
Lack of clerical support in evening/night necessitates nursing staff and manager doing patient registrations, and collecting medical records.			
Security is problematic, with gaps in coverage and hospital security issues with responding to calls.			
Action Area/ Strategy (please tick where applicable)		Justification	
Re-skill	X	EMR has increased clerical time, needs more centralised clerical support to support accuracy in registrations and admission. Suggest the need for clerical registrations 24 hours a day. After onsite clerical go home for the day to be centralised from Base hospital - register pts over phone - more cost effective.  Investigate stores in relation to unpacking, as currently stores unpacked by nursing staff.	
Redeploy	X		
Realign			
Redesign	X	Increase clerical hours by 4 hours each day ie: 1630-2030hrs/7 days. No-one at front desk on weekend from 1600hrs - busiest time for visitors.	
Recruit	X	Currently preparing business case for HSA.  With an increase in clerical hours to 2030hrs this could also allow the relocation of the main hospital reception to the ED for the 4 hours when there are visitors but no front reception.	
Other	X	Review current response times for both internal and external security.	

# Evaluation of workshops and process

Key points identified through participants evaluation

- Shared understanding of whole of ED skill mix issues
- Optimising existing resources
- Consistent and evidence based approach
- Promotes forward planning
- Strengthens local decision making
- Evidence – based and prioritised list for any funding enhancements
- Dynamic tool – adaptable as MoC and data change

# Where to from here....

- Developing a database
- Final report with strategic recommendations – Workforce (Redesign, extending roles), Industrial, Education, recommendations, service interface problems
- Follow up questionnaire to workshop participants
- Strategies to promote continued use – who to skill up?
- Potential for replication in other units using the EDWAT framework

# Thank you

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[http://www.health.nsw.gov.au/pubs/2010/ed\\_workforce\\_research.html](http://www.health.nsw.gov.au/pubs/2010/ed_workforce_research.html)

# Workforce Planning Process

1.

## ED Characteristics

Assessment of external characteristics that impact skill mix

2.

## Baseline Staff Skill Mix – Principles and Guidelines

Analysis of skill mix against generic skills framework

3.

## Specific Patient Characteristics and Models of Care

Skills required for: Paediatric, Aged and Mental Health presentations  
Models of Care – Scenario Framework  
Models of Care Profile and Guidelines

4.

## Education/Supervision Requirements

Review of education and clinical supervision requirements

6.

## Staff Skills Overview

Overview and prioritised strategies to address any variances from principles and guidelines for the sections listed above.