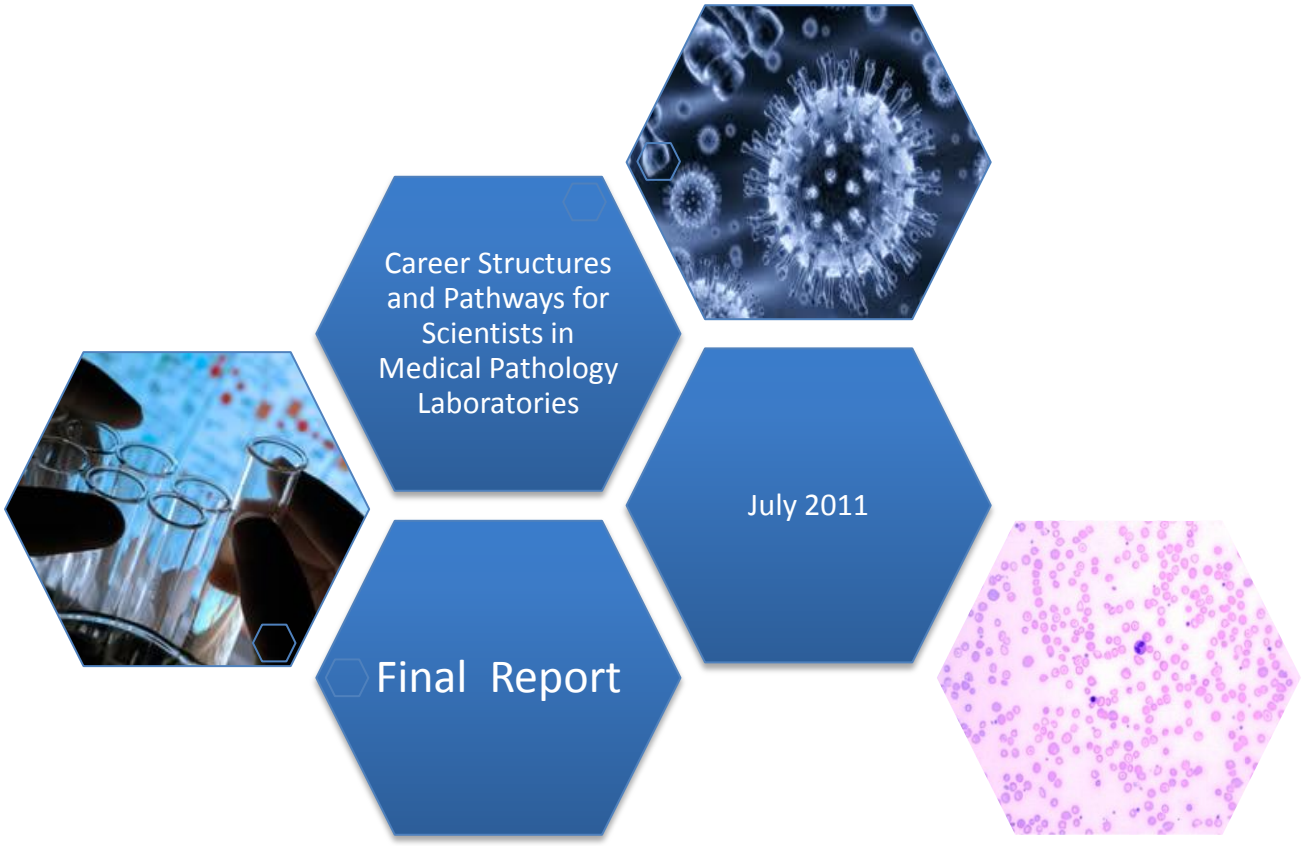

Career Structures and Pathways for Scientists in Medical Pathology Laboratories

July 2011

Final Report

Human Capital alliance

Human capital specialists

Prepared for the Australian Government's

Department of Health and Ageing

RFQ 432/0910

Contents

Project objectives

Human Capital Alliance (International) Pty Ltd (HCA) was commissioned by the Department of Health and Ageing (DoHA) to undertake the *Career Structures and Pathways for the Scientific Workforce in Medical Pathology Laboratories* project (the Project).

The primary objective of this project was:

- to investigate options to promote workforce retention especially through career pathways development for the scientific workforce in medical pathology laboratories;

A second aim was:

- to provide an initial insight into current and future workforce requirements and the appropriateness and adequacy of current supply strategies.

The medical pathology laboratory scientific workforce was defined as including senior scientists, medical laboratory scientists, medical laboratory technicians and laboratory assistants although individuals within each workforce grouping may hold titles that vary somewhat from these specific occupational titles.

Project methodology

Overview

The method proposed for this project was articulated in the Project Plan released in December 2010[1]. This plan was implemented fairly close to intentions, both in terms of consultancy actions and the timing of those actions, although some flexibility was allowed. In terms of the actual activities undertaken, broadly the approach included:

- analysis of secondary data;
- search for and review of appropriate literature (both from Australia and overseas);
- extensive consultation in a variety of forms;
- gathering and analysing a sample of existing relevant industrial arrangements;
- specific study of a number of laboratory / employer cases; and
- collection and analysis of a number of job descriptions.

Figure 1 overviews the consultancy process, demonstrating the linear or sequential nature of consultancy actions.

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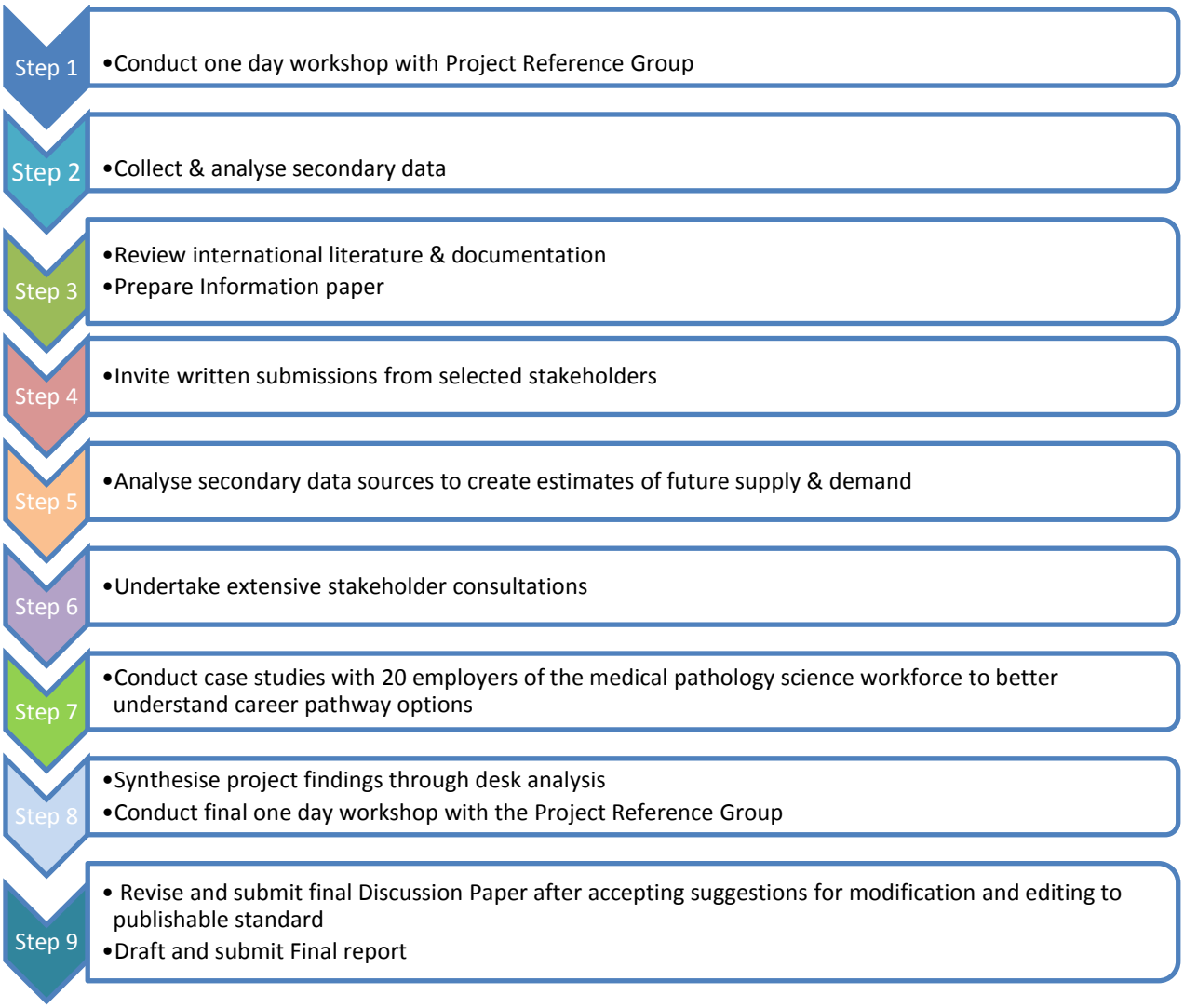
[1] HCA (2010) *Career Structures and Pathways for Scientists in Medical Pathology Laboratories — Project Plan*, December 2010

Figure 1: Overview of method / activities for the project



The way in which each project activity was carried out is described in greater detail in the following sections.

Initial project reference group workshop

On the 24th of November 2010 shortly after the project commenced a one day workshop was conducted with members of the Project Reference Group, DoHA's project monitoring team and HCA. The PRG membership included:

Dr Tony Badrick – Australian Association of Clinical Biochemists (AACB)

Associate Professor Vicki Clifton – Endocrine Society of Australia (ESA)

Dr Nadine Richings – Fertility Society of Australia (FSA)

Associate Professor Tony Woods – Australian Institute of Medical Scientists (AIMS)

Dr John Burnett – Royal College of Pathologists of Australasia – Faculty of Science (RCPA)

Ms Sharon Bain – Human Genetics Society of Australia (HGSA)

Ms Gina Aitken – Australian and New Zealand Society of Blood Transfusion (ANZSBT)

Ms Gillian Phillips – Australian Society of Cytology Inc (ASC)

Dr Ross Brown – Haematology Society of Australia and New Zealand (HSANZ)

Ms Louise Wienholt – Australian Society of Clinical Immunology and Allergy (ASCIA)

Mr Silvano Palladino – Australian Society for Microbiology (ASM)

Dr Peter Flett - Workforce Planner

DoHA's project team included Debbie Stanford, Bruce Boyd, Pam Franz, Pamela McKittrick and Peter Walsh and HCA's Lee Ridoutt, Darryl Graham, Joanne Bagnulo and Victoria Pilbeam.

The Endocrine Society of Australia and the Fertility Society of Australia[2] participated in the first meeting of the Project Reference Group and made a valuable contribution. However, both Societies subsequently chose to withdraw from the Project Reference Group for the remainder of the project because they felt the project was of less relevance to their constituents at this point in time.

The workshop commenced with opening and introductions by the Department, followed by a power point presentation and overview of the project and draft Project Plan by HCA. The discussion was then opened up to each of the members of the PRG to give a brief description of their relevant Association, relevant workforce issues as well as identifying their priority concerns. In no particular order of importance, the priorities identified were as follows:

- role delineation between types of laboratory scientist workforce categories;
- consideration of remuneration;
- career progression / framework options (including technicians);
- how to make increase attractiveness of the profession;
- emerging technology and its influence on demand;
- how to address upcoming shortages;
- understanding of the breadth of difference between workforce groups and how they will be affected by upcoming shortages;
- how to influence TAFE about aspects of quality in regard to VET (Vocational Education and Training) level training, along with content and the number of graduates;

[2] In the initial PRG meeting a distinction was made between the work done by members of the Fertility Society of Australia whose scientists are working to produce an embryo as a *living being* in comparison to the remainder of the scientific workforce in medical pathology laboratories who are generally working with pathology samples or specimens relating to *disease*.

- enabling a well described workforce able to engage with each other, discuss funding implications, what must be taken into account and the largest barriers for workforce issues (from the Commonwealth); and
- description of what workforce supply we have now and what we will have in 3-5 years.

At the end of these discussions each Association was invited to provide further information, documentation, any known and relevant literature or further comments as they wished.

As a follow up to the workshop, attendees were sent a request for feedback on relevant and available literature, current Association membership numbers, information on membership coverage, and arrangement options for stakeholder consultations. All PRG members responded and provided the requested information. The initial workshop set the tone for the project and clearly defined its priorities, objectives and required outcomes.

Collection & analysis of secondary data

In carrying out step 2 extensive secondary data (that is data collected for another purpose) was gathered, collated and analysed. Analysis of secondary data was reported in the *Information Paper* and the *Discussion Paper*. Table 1 below provides a brief overview of the data sets used to inform this stage of the project.

Table 1: Secondary data sources gathered and analysed

Data source	Information provided
ABS (Australian Bureau of Statistics)	Number of employed persons in occupation codes ANZSCO (Australian & New Zealand Standard Classification of Occupations) 234611 and 311213 by age, gender, hours worked and level of highest educational attainment at the latest Population Census (2006). More limited data for comparative purposes was gathered from the 1996 and 2001 Population Censuses.
Association membership data	Current membership number, percentage of total workforce covered by membership numbers, overlap of membership with other Associations included in the study and trend membership data going back 5 years.
DEEWR	Commencing enrolments and completions (graduations) from AIMS accredited and related courses in Australian universities. Recent trends and projected supply of newly qualified graduates.
University data from AIMS accredited course	2010 enrolments by year 1-3(4), graduations 2009-2005 and projected enrolments 2011-2015 were collected from each university[3].

[3] This is not strictly 'secondary' data since it was collected first by HCA for the specific purposes of this project. In so far as it is data also collected (later) by DEEWR, it can be considered 'secondary' data.

Data source	Information provided
providers	
NCVER	Patterns of enrolment and completions from relevant VET courses potentially leading to employment as technical officers and / or laboratory assistants.
DIAC & AIMS	Data on overseas arrivals and departures, skilled migration, temporary migration (Visa 457) and onshore visa applications, information on the net gain to Australia of medical scientists.
MBS	Demand for medical pathology services as assessed through analysis of trends in claims data on all item numbers associated with pathology services from 2005/06 financial year to 2009/10.

Step 5 was largely a continuation of step 3, except at this stage of the project a more extensive analysis of future supply and demand labour markets was explored.

The labour market analysis component of the consultancy project became a less compelling and secondary objective to the search for a career framework. In any case attempting to estimate current and future supply and demand proved difficult to complete using classic workforce planning modelling approaches. The process was hamstrung by the limitations of available workforce data; in particular the very basics (an accurate estimate of workforce size) was not attainable.

Nevertheless a description of elements of the labour market was reported in an Appendix to the *Discussion Paper* where future data needs and options were explored.

Review international literature & documentation

In satisfying the requirements of step 3 an extensive search for relevant literature was undertaken from Australia, New Zealand, the USA, Canada and the UK and further steps were taken to obtain literature from the USA and Canada through personal contact with key informants identified by the Department, PRG members and the HCA team.

The literature search was built around existing documentation already gathered by the Department, the consultant or PRG members. This was supplemented by an extensive search of the web and relevant abstract databases. The databases and search methods that were interrogated were:

- Medline, PubMed electronic databases;
- internet search engines (Google Scholar, Scirus);
- internet sites of State Governments in Australia; and
- citation checking.

Set out in Table 2 below is the search criteria for the literature review.

Table 2: Literature search criteria

Search terms		
Workforce	**Human resource issues**	**Service settings**
Medical scientist	Work organisation	Pathology
Clinical scientist	Career development / progress	Laboratory
Technician	Education & training	Research
Technologist	Supply / Demand	Urban – rural service location
Assistant	Role delineation	

The literature review attempted to differentiate between different types of literature reflecting research studies of reasonable scientific method and articles that enhanced the understanding of current practices, offered viewpoints of specialists in the field (e.g. editorials and commentaries) and reports on surveys of opinion.

The literature gathered provided data on levels of medical pathology laboratory workforce but was poor in regard to career frameworks in certain overseas countries and provided limited comment on trends in specialist activity.

An initial draft of the *Information Paper* was submitted to the Department for review on the 22nd of December 2010. The *Information Paper* was then reworked and submitted in early February 2011. The *Information Paper* has since been accepted and published on the Department's website available at the following address:

http://www.health.gov.au/internet/main/publishing.nsf/Content/qupp-scientific+workforce

Extensive stakeholder consultations

Following acceptance by the Department and the PRG of the *Information Paper* it was published on DoHA's website for all interested stakeholders to read and provide comment (see link above). The *Information Paper* was also provided in hard or soft copy to all persons consulted prior to their consultation with HCA. The purpose of the *Information Paper* was to inform these consultations and its processes and elements were highlighted in discussions during these consultations (Powerpoint presentation available).

Over the period January to April 2011 extensive stakeholder consultations in the form of **focus groups forums** (13), **case studies** (17) and **employer interviews** (6) were undertaken. These stakeholder consultations generated significant interest in the project and provided an enormous amount of feedback, insight and qualitative data to be considered in development of the project findings. These direct consultations were further supported by email submissions (21), completed feedback/survey

forms by individuals who had attended a focus group forum (10) and numerous phone calls and in person interviews.

Focus group discussions

Table 3 below illustrates the size and place of focus group consultations. A total of 317 scientists, technicians and academics attended one of the 13 focus group discussions.

Table 3: List of focus group consultations by location and number of participants

Location of the focus group (State / Territory, venue)	Number of participants attending
NSW - hosted at the Clinical Sciences Building, Concord Hospital 7 March 2011	81
SA - hosted at the Rieger Building 11 March 2011	39
QLD - hosted at Sullivan Nicolaides Pathology 14 March 2011	39
WA - hosted at Path West 15 March 2011	21
ACT - hosted at ACT Pathology 18 March 2011	18
Senior scientists teleconference 21 March 2011	9
VIC - hosted at Royal Melbourne Hospital 22 March 2011	47
Fertility Society of Australia - hosted at University of Melbourne 23 March 2011	13
Cytology - hosted at the Victorian Cytology Service 24 March 2011	6
TAS - hosted at Royal Hobart Hospital 28 March 2011	13
Rural & remote scientists teleconference 30 March 2011	9
Young scientists teleconference 31 March 2011	11
NT - hosted at Royal Darwin Hospital 5th of April 2011	11

These consultations were not limited to attendance by the hosting organisation's employees only and efforts were made through professional Associations to invite broad participation. Extensive notes were taken from each focus group discussion and later analysed using a standard 'grounded theory' approach.

Written submissions

All attendees at any of the consultation processes for this project were invited to submit a written submission to the HCA project team if they felt their particular issues had not been articulated sufficiently during the consultations. A template to guide responses was provided to persons who wished to supply written comment (see Appendix A). A total of 31 persons availed themselves of this opportunity with 21 providing email submissions and a further ten individuals who had attended a focus group forum completed and returned a feedback/survey form in hard copy. Numerous individuals also made phone calls to the consultant.

All of the documentation provided was placed into a data base and subsequently analysed for additional themes and elaboration on content in the *Information Paper* (many of the quotes in the *Discussion Paper* for instance were sourced from these written submissions), however a list only of persons who provided email submissions was maintained and this is provided in Table 4. While not complete it provides a good perspective on the diversity of the group that supplied written thoughts.

Table 4: List of persons who provided written submissions (by email)

Name of written submission provider	Affiliation / Interest
Ray Dauer	Austin Health
Desiree Berry	Principal Scientist / Laboratory Manager, Sutherland Centre of Immunology SEALS Pathology
Rosemary Kelly	Executive Officer Medical Scientists Association of Victoria
Franco Augustin	Laverty
David McPherson	SWPS Deniliquin
David Hallett	Medical Scientist Abbott Pathology
Juan Merif	Senior Hospital Scientist Microbiology Department SEALS-POWH
Rebecca Evans	TAFE Lecturer, WA
Margaret Holschier	NSW Hospital Scientist in rural area
Leonie Smith	North West Pathology
Jennifer Williams	Principal Scientist, Microbiology Unit, Alfred Pathology Service
Mark Hanlon	Senior Hospital Scientist, Neurosurgery, Royal Prince Alfred Hospital
Mary Maslen	Reference Medical Mycology at the Microbiological Diagnostic Unit at Melbourne University – retired 1995
Gena Gonis	Senior Scientist, Bacteriology Laboratory, Department of Microbiology (Royal Children's Hospital and Royal Women's Hospital)
Belinda Cahill	Cytology Department SJOG Pathology, WA
Anne Drury	Unknown

Name of written submission provider	Affiliation / Interest
Tom Olma	Unknown
Susan Ireland	Manager Blood Organ & Tissue Programs, SA Department of Health
David Peterson	Manager On-line Services, South Australian Institute of Medical Education and Training
Gareth Baynam	Unknown
Harry Albani	TAFE Lecturer, NSW

Case study data collection & analysis

In total 17 case studies were undertaken in all States and Territories as shown in Table 5.

Table 5: List of case study laboratories / organisations

Organisation	Interviewee/s
Royal Darwin Hospital	Michael Lynch
Sydney Adventist Hospital	Bevan Hokin
Capital Pathology	Sandra Molloy and Phil Brew
Laverty Pathology	David Rankin
St Vincent's	Rob Short
Sullivan Nicolaides	Tony Badrick
SEALS	Trevor Cobain and Roger Wilson
Royal Perth Hospital (Microbiology)	Ian Kay
St John of God (WA)	Frank Natalotto
HAPS - Hunter Pathology	Stephen Brays; Bob Bettnelli
Peter MacCallum Institute	Dominic Wall
Austin Health	Nick Crinis
Gribbles	Helen Martin
Western Diagnostic (Darwin branch)	Roswyn Rennie
Health Scope, NT	Tim Lane
Royal Hobart Hospital	Rob White
Launceston General	David Seaton

Most of the case studies were public sector employers (8), although several private sector (6) and not for profit (3) service employers also participated in the study. The desired participation of private sector laboratories was frustrated somewhat by the decision of one of the major companies not to engage with the project. As might be expected, most of the case study employers were located in metropolitan areas although nearly half (48%) had branches in rural and even remote areas. The case studies were distributed over all States and Territories as shown in Table 6.

Table 6: Distribution of case study locations

Jurisdiction	Number of case studies
ACT	1
NSW	5
NT	3
QLD	1
SA	1
TAS	2
VIC	2
WA	2

At each case study site quantitative and qualitative data was collected (using a set protocol, see Appendix B) to allow an understanding to be gained of:

a.) how work is conducted in medical pathology laboratories;
b.) numbers of personnel required to conduct the work;
c.) what types of personnel are required (skills mix);
d.) how personnel are deployed and supervised;
e.) organisational structures;
f.) industrial arrangements;
g.) job classifications/job descriptions;
h.) recruitment processes; and
i.) career structure / progression approaches.

Data gained through the stakeholder consultations was entered into an ACCESS data base. De-identified findings are reported in the *Discussion Paper* and its Appendices.

During the case study data collection **job descriptions** were collected. Forty eight job descriptions were collected and entered into an ACCESS data base, de-identified and analysed for commonalities in remuneration levels, competency and academic requirements. The findings of this analysis are reported in the *Discussion Paper*. The types of job descriptions collected were as follows.

Table 7: Frequency of job description positions

Type of position	Frequency of Type of position
Assistant	9
Technician	7

Type of position	Frequency of Type of position
Senior Technician	4
Junior Scientist	11
Mid-Level Scientist	9
Senior Scientist	8

Employer interviews

Both the Australian Association of Private Pathologists (AAPP) and the National Council of Public Pathology (NCOPP) were approached to (1) seek their views as employer bodies and (2) to obtain appropriate employer representatives to interview. The AAPP decided not to participate in the study, and while the NCOPP also did not provide a specific view on career frameworks it did assist interviews being undertaken with its membership. Accordingly, six interviews were undertaken with public sector employers as listed in Table 8.

Table 8: List of employer interview subjects

Organisation	Interviewee
SEALS, Prince of Wales Hospital, Randwick	Associate Prof Roger Wilson, Executive Director of SEALS and former NCOPP President
Pathology Queensland, Royal Brisbane Hospital	Dr Michael Whiley Senior Director Pathology Queensland
Path West, WA	Dr Dominic Mallon, Chief Pathologist, Path West
Royal Hobart	Scientist, Rob White
ACT Pathology	Prof Julia Potter Executive Director
NT Government Pathology Service	Dr Ferenc Szabo Director of Pathology

Extensive notes were kept for each of the interviews and analysed similarly to the other qualitative data gathered from consultations.

Review of award structures

A review of award structures was undertaken even though it was beyond the original project planning and scope but was seen as adding significant value to the project. Award structures from various states were collected and analysed for similarities and compatibilities with special attention paid to pros and cons of each in regard to potential career frameworks. The findings of the review of award structures are reported in the *Discussion Paper* and its Appendices.

Final one day workshop with the Project Reference Group

A final project workshop was held on the 21st June, 2011 and was attended by the Department project team, members of the PRG, invited stakeholders and the HCA project team. The attendees included the following as well as HCA consultants:

Mr Silvano Palladino	Dr Peter Vervaart
Ms Gina Aitken	Dr Paul Shield
Ms Louise Wienholt	Mr Grant King
Ms Gillian Phillips	Miss Joanne Clarke
Ms Sharon Baine	Mr Bill Wilson
Dr Peter Flett	Ms Debbie Stanford
Dr John Burnett	Ms Pamela McKittrick
Prof Tony Woods	Ms Suzanne Petrie
A/Prof Tony Badrick	Ms Pam Franz
Mr Peter Graham	Mr Bruce Boyd

The purpose of the gathering was to 'workshop' the full project activities undertaken, methodologies applied, findings generated and resultant products developed (*Information Paper* and *Discussion Paper*). HCA facilitated the workshop and presented a slide presentation highlighting the main components of the *Discussion Paper*. The main workshop discussions which directed final amendment of the *Discussion Paper* are detailed below:

- Until the last few years, NATA has been collecting data from employers about their staff structures including roles, length of service, qualifications etc. Whilst this data is not available now and is obviously out of date, future discussions with NATA could investigate a way in which this data could be collected and utilised to be able to understand the quality of staffing mix within laboratories.
- Staffing laboratories is heavily influenced by changes in technology. Some employers are constructing their staffing mix by looking at competencies. It was noted that NATA are changing their focus towards competency of staffing in laboratories.
- It is an extremely difficult and time consuming process to change industrial arrangements (especially in the public sector). However, it would be beneficial to the workforce if a 'target structure' for career progression could be agreed upon nationally which could then promote any future industrial changes.
- For changes in career frameworks to assist the whole workforce, extended practice roles are important but not the only important component.
- Theme 1, Boundaries - deployment of staff is largely affected by the uptake and use of new technologies. There are problems with the VET supply of technicians that need further investigation.
- Theme 2, Segmentation - There is a need to find the right balance between 'specialist' scientists who are required for their extended knowledge and 'generalist' multi skilled scientists who should be recognised as specialists with different competencies that are also required. It was

noted that there is a protectionist attitude to some technical skills that are becoming redundant and there is a need to support a career model that actively trains people within the industry to transfer across to areas of new need. Management should be seen as a specialist area with articulated competencies. Experts could be determined by their level of national or international recognition.

- Theme 3, Labour market influence – The number of students registered in medical science degrees do not all end up as medical scientists as the course is seen as a stepping stone to medicine and some are overseas students. Students who complete medical science courses with on job training components do not necessarily enter the job market as they are employed from their placements. The TAFE laboratory science course was not written for medical science.
- Theme 4, Development of senior scientists – These roles require mentoring by current senior scientists.
- Theme 5, Wastage of experienced scientists – The fact that the workforce is predominantly female was noted here and that during child rearing years a number of high quality scientists are lost from the workforce or change from full time to part time.
- Theme 6, Rural service issues – The role of generalist scientists in rural placements should be considered a specialisation as they deal with a different environment and display increased contact with clinical staff, on call responsibilities, multi skilled, can sit on Hospital Executive committees etc. This area could be seen as a potential training ground especially for VET technicians who are identified within their regions and supported to stay there and continue to study.
- Theme 7, Competencies – It was suggested that the *Discussion Paper* needs to suggest actions to put competencies in place including the need for structures and templates for implementing competency assessment processes. NATA require a training matrix for staff – could this be used as a starting point?
- Theme 8, management and clinical pathways – were agreed upon.
- Theme 9, Clinical scientist roles – The new WA roles were explained, highlighting the need for similar registrar training roles which require funding.
- The Principles of a career framework model were agreed with some comments for possible amendment including:
    - Include multiple entry points;
    - A bridging course or on job structured academic program for technicians to become scientists;
    - Parallel pathways for generalist roles – needs an extra link;
    - Recognition of new science knowledge and research is needed, possibly join registrar or advanced training area; and
    - Need scope for people in 'holding pool' – incentives for those remaining in positions and not moving on.
- The following additions to the Actions / Next Steps were made:
    - Investigate possibility of NATA/NPAC data collection;

  - Investigate individual employers to enable suggested structure and skills mix of laboratories needed and demand estimation;
  - Trainee/bridging course for technicians to move to qualified scientists;
  - Develop user ready templates for employers to utilise competencies and career frameworks – aim to look at workforce more cohesively;
  - Standardise role definitions and terminology across the whole workforce – to be put into NPAC supervision documents, ABS codes;
  - Propose NCVER do research into TAFE course to investigate what they are producing, where their students are going, how they are being developed, how many move to pathology laboratories and different factors impeding the usage of this student cohort;
  - Investigate possibility of Apprenticeships;
  - Action to reduce costs for universities to build course structures for masters and PHDs – possibly professional doctorates.
- Insert a visual depiction of the workforce into the *Discussion Paper* to assist people in understanding the complexity of medical pathology team interactions.

Following the PRG workshop on the 21st June, 2011, HCA at the request of the Department presented a summary of its project findings at the subsequent stakeholder workshop on the 22nd June, 2011 which was facilitated by Urbis Pty Ltd.

The *Discussion Paper* is published on the Department's website available at the following address:

www.health.gov.au/qupp

Draft and submit final report

It is anticipated that the project will conclude with a slight delay due to the date of the final project workshop. The project is expected to close in early July 2011 with the submission and acceptance of this Final Report.

Project plan and timeline

The scheduled and actual completion date of project activities and deliverables according to the proposed timeline in the Project Plan are illustrated in the following table. While all tasks were not completed always as scheduled, the project has been brought to conclusion within the original and accepted timeframe.

Table 9: Project plan timeline (living document) — November 2010 to June 2011

Project activities	Team member responsibility	Nov	Dec	Jan	Feb	March	April	May	June
Signing of contract & initial meeting with Department	LR DG	Scheduled and completed 12th							
Submission of draft Project Plan	JB	Scheduled and completed 22nd							
Finalise Project Plan based on PRG feedback	JB LR DG	Scheduled and completed 30th							
Organise one day workshop with the Project Reference Group	JB	DoHA							
Conduct one day workshop with Project Reference Group	LR VP	24th							
Input from Project Reference Group employed in planning & methods	VP								
Identify secondary data collection sources	LR DG								
Data collection phase (Medicare Australia, DoHA, ABS Population Census data 2006)	JB								
Re-analyse data from National Survey undertaken by Urbis	LR		Not available at						

Project activities	Team member responsibility	Nov	Dec	Jan	Feb	March	April	May	June
			this time						
Analysis of initial secondary data	LR JB								
Documentation collection from DoHA	JB								
Undertake literature search (agreed key words)	VP								
Conduct literature review	VP								
Review documentation and literature	VP LR DG								
Desk analysis for *Information Paper*	JB VP LR DG								
First Progress Report / *Information Paper*			Scheduled 21st Completed 22nd						
Conduct teleconference with DoHA to finalise *Information Paper*	LR VP		24th		Resubmitted 25th				
Distribute *Information Paper* to stakeholders (through website/ mailing lists)	JB			Delayed by redrafting		3rd			
Invite written submissions from key pathology associations on *Information Paper*	LR DG JB			Delayed by redrafting					
Review and analyse responses to *Information Paper* for workforce supply and demand	DG VP								
Collect further secondary data for supply and	JB								

Project activities	Team member responsibility	Nov	Dec	Jan	Feb	March	April	May	June
demand trends (Medicare Australia, DEEWR)									
Analysis of supply and demand secondary data	LR JB								
Revision of the *Information Paper* to reflect findings on supply and demand trends	LR								
Develop interview schedule for Project Reference Group approval for consultations	JB								
Identify / organise stakeholder consultation participants	JB								
Conduct stakeholder consultations	VP LR DG								
Analysis of data from written submissions and stakeholder interviews	LR								
Second Progress Report						11th			
Develop case study template for site visits/ case studies/ consultations	VP JB								
Identify 20 private/ public employers to conduct case study	LR DG								
Organise consultations / site visits to case study employers	LR DG JB								
Collect data from case study employers including position descriptions from employers	JB VP DG								
Analyse and report case study data to identify	VP LR DG								

Project activities	Team member responsibility	Nov	Dec	Jan	Feb	March	April	May	June
career pathways and barriers									
Third Progress Report							Scheduled 15th	Completed 6th	
Report writing to develop *Discussion Paper* and present findings	Team								
Organise one day workshop with Project Reference Group	DoHA								
Conduct workshop with Project Reference Group	VP LR DG								21st and 22nd
Fourth Progress Report								Scheduled 27th	Completed 23rd
Organise feedback from workshop to be included in Final Report	VP								
Develop description of medical scientific workforce and supply and demand estimates	Team								
Final report writing	Team								
Submission of Final Report									Scheduled 20th completed early July 2011

Project achievements against the agreed performance measures

The stated objectives of the proposed consultancy in the Project Plan were to provide an analysis of current and future **requirements** (that is the demand for scientific workforce in medical pathology laboratories), to examine the **adequacy of current supply** strategies (both to deliver appropriate quality and quantity of workforce). Clearly there is a need to estimate current and future demand, at least qualitatively. The need to assess 'adequacy of current supply' implies a comparative analysis — 'adequacy' can only be judged against a benchmark which should be the workforce required.

There is also a need to investigate ways of stemming losses from the scientific workforce in medical pathology laboratories (that is improving **retention**). The common wisdom is that retention outcomes can be improved especially through reducing frustration with a lack of **career progress opportunity**.

As described in the Project Plan, quality and performance criteria was measured by the satisfaction and acceptance of project deliverables by the Department, key stakeholders and peak organisations. HCA's overall performance was measured by the completion of tasks as specified in the methodology, through the use of team member allocation, involvement of stakeholders at appropriate stages and completed deliverables and milestones within the project timeframe. Quality was also measured by the effective engagement of stakeholders through the appropriate use of inquiry. Ultimately however the quality and performance of the consultancy was measured through the acceptance of the *Information* and *Discussion Paper*s by the Department and the PRG and by acceptance of four progress reports and the Final Report by the Department.

In addition, HCA measures the success of the project from comments from PRG members who commented at the final PRG workshop that they have been satisfied with the processes and outcomes of the project. This was also evidenced by the cooperative way in which they assisted HCA to organise the relevant consultation processes throughout the project.

Collation of all key documents

The key documents prepared during the course of the project include the *Information Paper* and the *Discussion Paper*. These documents, due to their size and complexity are submitted as separate final documents, edited to a publishable standard in PDF format to the Department.

Similarly, the slide presentations that HCA presented at the initial PRG meeting on 24th November, 2010, the final PRG workshop on the 21st June, 2011 and the stakeholder group on 22 June, 2011 are also submitted as separate powerpoint files to this document.

Appendix A: Stakeholder feedback template

Career Structures and Pathways for the Scientific Workforce in Medical Pathology Laboratories

Feedback questionnaire following focus groups

Preface

The primary objective of the project is to provide an analysis of **current and future workforce supply and requirements** for the medical pathology scientific workforce. The study will examine the appropriateness and adequacy of current supply strategies and investigate options to promote improved retention outcomes especially **through career pathways development** for the scientific workforce.

Focus groups are one component of the project's methodology that aims to collect data directly from workforce participants and a range of other associated stakeholders. During the focus groups, participants requested the opportunity to comment on questions raised in writing.

We would greatly value your comments, favourable or otherwise but in order to enable us to cope with the expected volume of feedback and then to synthesise it, we ask that you use the attached format to respond.

We look forward to your comments and **thank you** again for your contribution so far and in anticipation of your feedback effort.

Demand

1. What do you consider are the main factors driving growth in demand? Are they likely to impact generally or on certain sectors of the industry more than others (for instance new disease control measures)?

Factors driving growth in demand	Impacts – generally or on certain sectors

2. Is it possible that these factors could be more influential in certain jurisdictions (eg because of State Government funding initiatives) or in different locations (eg rural areas)?

3. Are you able to direct us to literature or data on the strength of the demand influences we have discussed?

Supply

4. Graduate supply (of scientists) seems to be reducing (at least from the current AIMS accredited courses). Is this an illusion?

5. To what extent is supply from courses that are not accredited by AIMS being used and how are these introduced to laboratory work?

6. What are the key pathways into the laboratory technician and laboratory assistant workforce and how are laboratory technicians recruited?

Career framework

7. What do you think of the UK model as it was explained during the focus group? Specifically, what are the advantages and disadvantages that can be recognised of including laboratory assistants and laboratory technicians within an overarching scientific workforce model?

8. To what extent are the principles of the UK model – for instance promoting and facilitating progress from assistant level to potentially highly expert scientist level, strong articulation between levels, significant support for career progression in the form of on-the-job training – already being practised in Australian pathology services?

9. What are the major barriers to this type of thinking?

10. What types of career movement is possible between disciplines? Could / should movement be enhanced? If yes, how?

Appendix B: Case Study data collection tool

Case studies questions and data collection tool

Career Structures and Pathways for the Scientific Workforce in Medical Pathology Laboratories project

Advise respondents that the data reported will be de-identified

Date of case study	
Names of persons from who data obtained	
Positions	
Organisation name	
Jurisdiction NSW ( ) QLD ( ) VIC ( ) SA ( ) WA ( ) TAS ( ) NT ( ) ACT ( )	Location Inner Metro ( ) Outer Metro ( ) Rural ( ) Mixed rural & urban ( ) Remote ( ) How many laboratories ……..
Sector in which providing services	Public ( ) Private ( ) Not for Profit ( )

The primary objective of this project is to provide an analysis of current and future workforce supply and requirements for the medical pathology scientific workforce. The study will examine the appropriateness and adequacy of current supply strategies and investigate options to promote improved retention outcomes especially through career pathways development for the scientific workforce.

The Scientific **Workforce is defined as** …

- Senior scientists – often a requirement for having completed relevant post graduate studies, progression within an employment structure or clinical specialisation or high levels of expert knowledge in comparatively narrow areas of practice.
- Medical laboratory scientists – generally graduates (although many of the older scientists have honed their skills on the job from lesser initial qualifications) with specific training in medical laboratory science and experience in testing in at least one of the disciplines of pathology.
- Technical officers or medical laboratory technicians –workers with two years' post-high school training to the Certificate IV or Associate Diploma levels.
- Laboratory assistants – are workers with no formal training other than that provided within the laboratory to meet specific needs.

The purpose of the case study is to understand how work is allocated in pathology laboratories between different types of labour.

Describe the organisation under study. How is it structured? Is it part of a larger structure (for instance a part of a larger public sector network or a subsidiary of a private sector corporate)? Does it function autonomously (especially in regard to HR) or is it governed by 'head office' policy & procedures? What is the history of the organisation? Is there some organisation culture aspects inherited from this history? Are there different types of laboratories run by the organisation?

Details of employer's workforce (scientific workforce? – not couriers, data entry, collection staff, management etc presumably)	
1. Employer Size (total employees):	
Total number of specific employee types	
a) senior scientists	
b) scientists	
c) lab technicians	
d) lab assistants	
e)Pathologists	
f) Other (if relevant)	
What are the job titles for used in your organisation …	
a.) Scientists?	
b.) Technicians?	
c.) Assistants?	
2. Is the current distribution of the scientist workforce where you think it should be? Are you anticipating changes in the future? How will things look if changes are made?	

How work is done	
3. Describe the way work is allocated in the different labs. Are there specialist units? What are they?	
4. What is the rationale behind any specialist units? What benefits do they provide?	

5. Could work be organised / allocated differently? Do you have any concerns about making some parts of your workforce too narrowly skilled?	
6. Do you want to change the current situation? How? What is stopping you?	
7. How is work allocated between different levels of scientific workforce (scientists / technicians / etc.)? Is this decision making process objective or discretionary?	
8. Basically who is doing what and how is that decision made?	
Industrial relations	
9. What are the industrial arrangements in place(list the relevant award/s, enterprise bargaining agreements, etc.?	
10. Can we get a copy of the award / EBA?	
11. Do you have any job descriptions/ position descriptions for the scientist workforce (check job titles elicited above)? If yes can we get a copy of them?	
Recruitment effort	
12. Where do you normally recruit new scientists from? Explore preferences	

(for instance from AIMS accredited courses, other specific courses)? Identify fall-back options, and fall-fall-back options.	
13. Are qualifications significantly important? Is experience recognised ever in lieu of qualifications? What about overseas qualified – specific issues?	
14. What about technicians / technical officers? What qualifications are required? Or desired?	
15. What about laboratory assistants? What qualifications are required? Or desired if any? Might need to go back and explore answer to question (2) to make sense of these questions	
16. Are there general rules and protocols for recruitment in the organisation or is it open to preferences of line managers (within the constraints of the award / EBA of course)? Please describe.	
17. Do you use competencies at all to guide recruitment actions?	
18. Post recruitment, is there a set process of induction / training to prepare new recruits for work in the laboratory? Are there any training issues?	
Career frameworks / progression	
19. Do you have a career framework or model for scientific staff … other than that prescribed in the industrial arrangements? Does this include all categories of staff? Please describe …	
20. Are there set processes in place for progression and promotion?	
21. How does someone go from one level to the next? Does it happen very often internally or is it mostly recruitment from outside to higher	

positions?	
22. Is some effort made to move people through the various categories to higher levels? That is, is this process encouraged and / or supported … for instance with targeted training, employer support for scientists undertaking study to become a senior scientist?	
23. If support is provided, is this through formal processes of support (i.e. sent to relevant TAFE or university. courses?	
24. What are seen as the benefits of structured career progression? What would be the purpose of either doing or not doing so? Explore what a career structure might look like ….	
25. What are the key principles that would underpin a career structure / framework that would encourage attraction and retention?	
26. Is there a company policy?	
27. How would individuals be selected to participate (i.e. self selected company selected)?	

Other issues	
28. What is the annual number of staff turn over	
29. What are some of the reasons for staff turn over?	