Factors influencing the development of advanced practice nursing in Singapore

SCHOBER, Madrean Margaret

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Appendix 1  
Country specific impetus for APN roles

<table>
<thead>
<tr>
<th>Country</th>
<th>Impetus for Advanced Practice Nursing</th>
</tr>
</thead>
</table>
| Australia                | Shortage of doctors, especially in rural and remote areas  
Nursing’s desire for a clinical ladder                                                                                                                                  |
| Bahrain                  | Demand for specialised nursing care                                                                                                                                 |
| Botswana                 | Urgent need for Primary Health Care (PHC) services                                                                                                                      |
| Canada                   | Need for access to PHC services  
Increased emphasis on health promotion & disease prevention  
Emphasis on team care delivery  
Public Demand                                                                                                     |
| France                   | Anticipated physician shortage  
Healthcare system restructuring                                                                                            |
| Hong Kong                | Education programme development  
Change in nursing grade to improve clinical focus                                                                                                                     |
| Iceland                  | Exposure to education in the USA  
Rising need for specialist nursing services                                                                                                                              |
| Ireland                  | Access to PHC services  
Clinical career path  
Career path tied to pay scale                                                                                                                                             |
| Japan                    | Need for highly skilled specialty nurses                                                                                                                                     |
| Macau                    | Consumer demand for quality services  
Innovation of nursing professionals  
Privatisation of services                                                                                                                                                |
| Netherlands              | Physician shortage/Workforce planning  
Need for hospital based services  
Demand for PHC/chronic illnesses  
Career advancement for nursing                                                                                                                                           |
| New Zealand              | Standardisation of current and new nursing roles  
Realisation of full potential of nursing                                                                                                                                       |
| Oman                     | Interest in community nursing & home visiting  
Upgrade nursing education  
Access to PHC                                                                                                                             |
| Pakistan                 | Graduate education programme development                                                                                                                                  |
| Philippines              | Progression of specialisation in nursing                                                                                                                                 |
| Singapore                | Professional development/enhance status of nursing  
Progression of specialty and subspeciality nursing  
Clinical career ladder                                                                                                                                                    |
| Sweden                   | Identified population with need: elderly  
Education programme development                                                                                                                                           |
| Switzerland              | Graduate education programme development  
Knowledge advancement for nurses  
Anticipated physician shortage                                                                                                                                            |
| Taiwan                   | Physician shortage  
Increasing inpatient acuity                                                                                                                                                  |
| Thailand                 | PHC needs/Workforce planning  
Increased medical specialisation                                                                                                                                             |
| United Kingdom           | Exposure to models from USA  
PHC needs  
Nursing specialisation  
Populations needing care  
Decrease in Junior Doctor hours                                                                                                                                            |
| (England, Northern Ireland, Scotland, Wales) | Populations with unmet needs  
Physician shortage  
Enhancement of hospital services                                                                                                                                 |
| United States of America | Shortage of health professionals, especially physicians  
Urgent needs for PHC services                                                                                                                                                    |
| Western Pacific Region   |                                                                                                                                                                                                 |

(Source: Adapted from Schober & Affara, 2006, p.59)
<table>
<thead>
<tr>
<th>Country or Region</th>
<th>Title(s) Used</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>Nurse Practitioner**</td>
</tr>
<tr>
<td>Bahrain</td>
<td>Specialist Nurse*</td>
</tr>
<tr>
<td>Botswana</td>
<td>Family Nurse Practitioner*</td>
</tr>
<tr>
<td>Canada</td>
<td>Clinical Nurse Specialist Advanced Practice Nurse, Nurse Practitioner. Acute Care Nurse Practitioner, Specialty Nurse Practitioner, Primary Healthcare Nurse Practitioner, Clinical Nurse Specialist/Nurse Practitioner * &amp; **</td>
</tr>
<tr>
<td>France</td>
<td>Nursing approach to a specialty e.g. anaesthesia*</td>
</tr>
<tr>
<td>Hong Kong</td>
<td>Advanced Practice Nurse, Nurse Practitioner, Nurse Specialist *</td>
</tr>
<tr>
<td>Iceland</td>
<td>Nurse Specialist</td>
</tr>
<tr>
<td>Ireland</td>
<td>Advanced Nurse Practitioner (Area of Practice in brackets) Advanced Midwife Practitioner</td>
</tr>
<tr>
<td>Japan</td>
<td>Certified Nurse Specialist</td>
</tr>
<tr>
<td>Jordan</td>
<td>Nurse Specialist</td>
</tr>
<tr>
<td>Macao</td>
<td>Specialist Nurse*</td>
</tr>
<tr>
<td>Netherlands</td>
<td>Nurse Practitioner Nursing Specialist (Dutch: Verpleegkundig specialist)</td>
</tr>
<tr>
<td>New Zealand</td>
<td>Nurse Practitioner</td>
</tr>
<tr>
<td>Philippines</td>
<td>Clinical Nurse Specialist *</td>
</tr>
<tr>
<td>Thailand</td>
<td>Clinical Nurse Specialist, Nurse Practitioner Community Health Nurse Practitioner</td>
</tr>
<tr>
<td>Taiwan</td>
<td>Advanced Practice Nurse* (Official title used in Chinese only)</td>
</tr>
<tr>
<td>Singapore</td>
<td>Advanced Practice Nurse</td>
</tr>
<tr>
<td>Sweden</td>
<td>Advanced Nurse Practitioner in Primary Health Care, Advanced Specialist Nurse*</td>
</tr>
<tr>
<td>Switzerland</td>
<td>Advanced Practice Nurse, Clinical Nurse Specialist, Nurse Specialist</td>
</tr>
<tr>
<td>Republic of South Africa</td>
<td>Advanced Practice Nurse*</td>
</tr>
<tr>
<td>UK</td>
<td>Advanced Nurse Practitioner, Advanced Nurse, Specialist, Nurse Consultant, Community Matron*</td>
</tr>
<tr>
<td>USA</td>
<td>Nurse Practitioner, Clinical Nurse Specialist, Nurse Midwife, Nurse Anaesthetist</td>
</tr>
<tr>
<td>Western Pacific</td>
<td>Nurse Practitioner or Mid-level Practitioner* &amp; **</td>
</tr>
</tbody>
</table>

*Official Title Recognition pending
** Varies among the states, provinces or island  
(Adapted from Schober & Affara, 2006, p. 27)

**Appendix 2**
**Titles used to denote Advanced Practice Nursing**
Appendix 3
Illustrations of APN Scopes of Practice

Australia and New Zealand recommend a dual country scope of practice under the TransTasman Mutual Recognition Agreement:

A nurse practitioner is a registered nurse educated to function autonomously and collaboratively in an advanced and extended role. The NP role includes assessment and management of the clients using nursing knowledge and skills and may include but is not limited to the direct referral of patients to other health professionals, prescribing medication and offering diagnostic investigations. The nurse practitioner role is grounded in the nursing professional’s values, knowledge theories and practice and provides innovative and flexible health care delivery that complements other health care providers. The scope of practice of the nurse practitioner is determined by the context in which the nurse practitioner is authorized to practice.


Canada
An RN(EC)[RN(Extended Class)] has advanced knowledge and decision-making skills in health assessment, diagnosis, therapeutics (including pharmacological, complementary and counseling interventions), health management and community development and planning. Their scope of practice includes:

- Assessing and providing services to clients of all developmental stages, and to families and communities; and
- Providing comprehensive health services encompassing:
  - treatment of episodic illness and injuries;
  - identification and management of chronic stable conditions;
  - prevention of disease and injuries;
  - health promotion and education;
  - rehabilitation;
continuity of care; and
support services.

Source: College of Nursing of Ontario. (2005)

Singapore

APNs practice in collaboration and partnership with medical practitioners and other health care professionals to:

i. diagnose, treat and manage acute and/or chronic illnesses. They will order and interpret appropriate diagnostic and laboratory tests, and furnish pharmacologic agents, treatments, and non-pharmacologic therapies. Educating and counselling individuals and their families, conducting comprehensive health assessments aimed at health promotion and disease prevention will form part of their work.

ii. initiate and implement changes in the health care service in response to patient needs and service demands.

iii. participate in education of nursing staff and health care professionals through role modelling, mentoring and sharing of knowledge and expertise.

iv. initiate and coordinate nursing research. They should identify and incorporate into practice the best available research evidence in order to meet patient and service needs.

Appendix 4

International list of APN education programmes
<table>
<thead>
<tr>
<th>Country</th>
<th>Programme Length</th>
<th>Qualification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>24-72 months depending on full or part time status (additional 2 months for medication module)</td>
<td>Diploma, MSN</td>
</tr>
<tr>
<td>Bahrain</td>
<td>9-18 months dependent on entry criteria</td>
<td>Diploma (post-basic in specialised area)</td>
</tr>
<tr>
<td>Botswana</td>
<td>18 months</td>
<td>Diploma</td>
</tr>
<tr>
<td>Canada</td>
<td>Variable (post-diploma, undergraduate or graduate levels)</td>
<td>Diploma, Certificate BSN, MSN</td>
</tr>
<tr>
<td>Finland</td>
<td>2 ½ years part time</td>
<td>Clinical Expert Nurse</td>
</tr>
<tr>
<td>Hong Kong</td>
<td>3 years part-time</td>
<td>MSN</td>
</tr>
<tr>
<td>Iceland</td>
<td>24 months</td>
<td>MSN</td>
</tr>
<tr>
<td>Ireland</td>
<td>24 months</td>
<td>MN – ANP/AMP</td>
</tr>
<tr>
<td>Japan</td>
<td>24 months</td>
<td>MSN, Certification</td>
</tr>
<tr>
<td>Macau</td>
<td>24 months</td>
<td>Specialised Nurse</td>
</tr>
<tr>
<td>Netherlands</td>
<td>2 years</td>
<td>MSN</td>
</tr>
<tr>
<td>New Zealand</td>
<td>24 months</td>
<td>MSN</td>
</tr>
<tr>
<td>Pakistan</td>
<td>2 years full-time</td>
<td>MN</td>
</tr>
<tr>
<td>Republic of South Africa</td>
<td>12 months post-basic</td>
<td>Specialist</td>
</tr>
<tr>
<td>Singapore</td>
<td>8 months</td>
<td>Advanced Diploma MN</td>
</tr>
<tr>
<td></td>
<td>18-24 months</td>
<td></td>
</tr>
<tr>
<td>Sweden</td>
<td>18-24 months</td>
<td>MSN after full 24 months; ANP after 18 months</td>
</tr>
<tr>
<td>Switzerland</td>
<td>2 year</td>
<td>MSN</td>
</tr>
<tr>
<td></td>
<td>36 months</td>
<td></td>
</tr>
<tr>
<td>Taiwan</td>
<td>4 months</td>
<td>Certification MN</td>
</tr>
<tr>
<td></td>
<td>24 months</td>
<td></td>
</tr>
<tr>
<td>Thailand</td>
<td>4 months</td>
<td>Certificate General NP MN, CHNP</td>
</tr>
<tr>
<td></td>
<td>24 Months</td>
<td></td>
</tr>
<tr>
<td>United Kingdom</td>
<td>2-3 years usually part time</td>
<td>BSc NP, MSc NP, MSc ANP</td>
</tr>
<tr>
<td>United States</td>
<td>18 – 24 months depending on entry level – progressing to clinical doctorate</td>
<td>MSN post-masters certificate DNP</td>
</tr>
<tr>
<td>Western Pacific</td>
<td>At least one year (varies among the islands)</td>
<td>Nurse Practitioner, Nurse Specialist</td>
</tr>
</tbody>
</table>

(Adapted from Schober & Affara, 2006, p.119)
Appendix 5

International list of APN Practice Settings and Domains of Practice
<table>
<thead>
<tr>
<th>Country</th>
<th>Setting</th>
<th>Practice</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>PHC</td>
<td>Comprehensive Services</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Community</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Rural and Remote</td>
</tr>
<tr>
<td>Bahrain</td>
<td>Hospitals</td>
<td>Specialty: Cardiac, Mental Health, Emergency, Maternity</td>
</tr>
<tr>
<td></td>
<td>PHC</td>
<td>Community Health</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Home Care</td>
</tr>
<tr>
<td>Botswana</td>
<td>PHC</td>
<td>Comprehensive Services</td>
</tr>
<tr>
<td>Canada</td>
<td>Hospitals</td>
<td>Specialty: specific age-based patient populations, specific clinical areas, specific disease processes, specific communities</td>
</tr>
<tr>
<td></td>
<td>PHC</td>
<td>Comprehensive Services in Rural and Remote areas</td>
</tr>
<tr>
<td>Hong Kong</td>
<td>Hospital</td>
<td>Specialty: Diabetes, Wound/Ostomy, Cardiac, HIV/AIDS, Urology</td>
</tr>
<tr>
<td>Iceland</td>
<td>Hospital</td>
<td>Specialty: Paediatrics, Adult, Obstetric, Critical Care, Pain Management</td>
</tr>
<tr>
<td>Ireland</td>
<td>PHC</td>
<td>Comprehensive Services</td>
</tr>
<tr>
<td>Japan</td>
<td>Hospital</td>
<td>Specialty: PHC, Paediatrics, Adult Care, Mental Health, Elder Care</td>
</tr>
<tr>
<td>Macau</td>
<td>Hospital</td>
<td>Specialty: Critical Care Hospice/Palliative Care, Hemodialysis, Cardiovascular, Genecology/Obstetrics,</td>
</tr>
<tr>
<td>Netherlands</td>
<td>Hospital</td>
<td>Specialty: Thoracic, Critical Care, Oncology, Paediatrics, Immunology, Chronic Illness, Elderly</td>
</tr>
<tr>
<td>New Zealand</td>
<td>Hospital</td>
<td>Specialty: school, home, occupational, neonatal, Maori health, , Ambulatory care</td>
</tr>
<tr>
<td></td>
<td>PHC</td>
<td>Comprehensive Services</td>
</tr>
<tr>
<td></td>
<td>General Practitioner Offices</td>
<td></td>
</tr>
<tr>
<td>Singapore</td>
<td>Hospital Polyclinics</td>
<td>Specialty: Adult Health, Mental Health, Critical Care</td>
</tr>
<tr>
<td>Switzerland</td>
<td>Hospital</td>
<td>Specialty HIV/AIDS Services, Renal Transplant, Oncology, Pain Management, Families of Children with Cleft Lip/Palate</td>
</tr>
<tr>
<td>Taiwan</td>
<td>Hospital</td>
<td>Specialty: Adult Care, Elderly Care</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>Hospital</td>
<td>Specialised across all specialties Comprehensive Services</td>
</tr>
<tr>
<td></td>
<td>Primary Care GP Offices</td>
<td></td>
</tr>
<tr>
<td>United States of America</td>
<td>Hospitals</td>
<td>Specialized across all specialties Comprehensive Services</td>
</tr>
<tr>
<td></td>
<td>PHC</td>
<td></td>
</tr>
<tr>
<td>Western Pacific Islands: Vanuatu, Kiribati, Samoa, Fiji, Cook</td>
<td>PHC</td>
<td>Comprehensive Services</td>
</tr>
</tbody>
</table>

(Adapted from Schober & Alfara, 2006, p. 44)
Dear (name)

My name is Madrean Schober and I am writing to invite you to participate in a research study investigating the factors influencing the development of advanced practice nursing roles in Singapore. In addition to my position as Visiting Fellow at the Alice Lee Centre for Nursing Studies, National University of Singapore I am also undertaking doctoral study at Sheffield Hallam University, United Kingdom. As an international consultant I have had a longstanding interest in the development and implementation of APN roles.

I am approaching you as someone who has knowledge about APN development in Singapore and may be interested in participating in the study. I am most interested in gaining the perspective of members from the university and it is my understanding that you have been associated with some aspect of the decision making and have been influential in developing this initiative. Your experience and insight would be most valuable to this study.

You are under no obligation to participate in the study but I would very much appreciate your contribution. A copy of an information sheet which provides details of the study and what your participation would entail is enclosed. Please read this in order to help you decide whether you wish to take part.

I will contact you shortly to discuss what your participation would involve and answer any questions you may have. In the meantime, if you have any immediate questions regarding the study please contact me by phone at 6516 7454 or email me at nurms@nus.edu.sg

Yours sincerely,

Madrean Schober
Doctoral Student
Sheffield Hallam University, United Kingdom
Appendix 7
Participant Information Sheet for Interviews of Government Officials; University Dignitaries and Faculty; Managers and Physicians

Factors Influencing Advanced Practice Nursing Development in Singapore
I am inviting you to take part in a research study. Before you decide if you are going to participate it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully and discuss it with others if you wish. Contact me if there is anything that is not clear or if you would like more information - contact details can be found at the end of this sheet. Please take time to decide whether or not you wish to take part.

Thank you for reading this.

What is the purpose of the study?
I am a doctoral student at Sheffield Hallam University, United Kingdom seeking to investigate the factors that have influenced APN development in Singapore. The research aims are to:

- To analyse policy drivers that provided momentum for introducing APN roles in Singapore.
- To investigate how policy directives have influenced the development of APN roles in Singapore. This will be examined from the perspective of a range of decision makers*.
  Areas to be considered include: role definition, scope of practice, education, standards, regulations, interaction with other health professionals and professional leadership.
- To explore the experiences of a sample of key decision makers and APNs in Singapore in order to identify how policy intentions were implemented in practice.

Note: * decision makers as used here denotes a range of stakeholders that will include but not be confined to government officials, chief nurses, nurse administrators/managers, nurse educators, university officials/administrators and physician educators/administrators.

Why have I been approached?
You have been approached as someone who has knowledge of APN development in Singapore.
Do I have to take part in the study?
No, participation is voluntary. It is up to you to decide whether or not to take part in the study. If you decide to participate you will be given this information sheet and be asked to sign a consent form. One copy of the consent form will be provided to you and an additional copy will remain with the researcher. If you decide to take part in this study you are still free to withdraw at any time without giving a reason.

Will I be reimbursed for my participation in the study?
No, your participation in the study is voluntary. You will not be reimbursed for participating in the research.

What will be involved if I agree to take part?
You will be invited to be interviewed by me. The interviews will last approximately 1 hour and will be arranged for a mutually convenient time and venue. The interview will be tape-recorded with your agreement. It will then be transcribed and analysed by me. If you choose not to have the interview tape-recorded this does not exclude you from taking part in the study. I would still like to interview you and will take notes during the interview. The interview will explore topics related to the research aims. Topics to be covered will include the nature of your role and your association with APN development in Singapore, your perspective on factors contributing to APN development, your understanding of the APN roles in the healthcare systems of Singapore and your understanding of how decisions related to APN roles were made and disseminated.

What other information will be collected in the study?
Additional interviews of key decision makers and observation of APNs or APN interns during every day practice will be conducted. Up to 20 interviews will be conducted with decision makers who have knowledge of the development of APNs in Singapore. Observation periods and interviews will be scheduled with eight APNs or APN interns in various advanced practice roles who work in a range of clinical settings in Singapore.

Will the information obtained in the study be confidential?
Yes. All information obtained will be treated as confidential and not disclosed to anyone other than the researcher and her university supervisors. The interview transcripts will not contain any information which could identify you, your colleagues or the organisation in which you work. Pseudonyms will be used where appropriate. The supervisors will review anonymised transcripts. Some short extracts from the transcripts may be used in the thesis and publications but these will remain anonymous.

What if examples of unsafe practice are observed or raised during the interview?
It may be that cases of unsafe practice or disclosure of sensitive issues which have not been resolved may be reported to the researcher during the interview. In these situations the researcher will act in accordance with the requirements of the Code of Professional Conduct. Core principles of the Code of Professional Conduct are based on respect for confidentiality while at the same time acting in the best interest of the situation revealed or persons involved. Any information discussed that could be considered harmful to another person or person (s) will be carefully considered and concerns raised to the appropriate person (s).
Will anyone else be told about my participation in the study?
No, I will not disclose your involvement to anyone else. The report and publications arising from the study will not identify any individuals who have participated in the study. No identifiers as to personal details, designation or organization to which you belong or position in which you work will be disclosed in analysis of the data, use of the quotes or possible publications. Transcripts will be coded for each participant and all details utilized for the recruitment of participants will be detached and contained in a separate document to be stored in a locked file in my office.

What will happen to the results of the study?
I plan to publish the findings in journals so that other people can learn from the work. If you would like to receive a short summary of the research findings please inform me at the end of interview or notify me at the address provided below.

Who is undertaking the research?
The study is undertaken by Madrean Schober, a doctoral student at Sheffield Hallam University in Sheffield, England. The lead supervisor for the study is Professor Kate Gerrish at Sheffield Hallam University. The second supervisor is Dr. Ann McDonnell at Sheffield Hallam University. Professor Debra Creedy, National University of Singapore, is the local supervisor in Singapore.

What if I wish to complain about the way in which this study has been conducted?
If you have any cause to complain about any aspect of the way in which you have been approached or treated during the course of this study please contact Professor Kate Gerrish, Director of Studies, or Professor Debra Creedy, local supervisor in Singapore.

How do I find out more about the study?
Madrean Schober
Senior Visiting Fellow
Alice Lee Centre for Nursing Studies
National University of Singapore
Block E3A, Level 3
7 Engineering Drive 1
Singapore 117574
Tel: (65) 6516 7454
Email: nurms@nus.edu.sg

Professor Kate Gerrish, Director of Studies
Email: k.gerrish@shu.ac.uk

Professor Desley Hegney, on site supervisor Singapore
Email: nurdgh@nus.edu.sg
Tel: (65) 6516 3109

If you would like to find out more about the study please contact:

For an independent opinion regarding the research and the rights of research participants, you may contact a staff member of the National University of Singapore Institutional Review Board (Attn: Mr Chan Tuck Wai, at telephone 6516 1234 or email at irb@nus.edu.sg).
CONSENT FORM
Participants for Interviews

Title of Research Project: Factors Influencing the Development of Advanced Practice Nursing Roles in Singapore

Name of Researcher: Madrean Schober

1. I confirm that I have read and understand the information sheet dated 13/11/2009 (Version 2) for the above study. I have had the opportunity to consider the information, ask questions and these have been answered satisfactorily.

2. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason, without my legal rights being affected.

3. I agree to take part in the above study.

4. I agree/do not agree to the audiotaping of the interview.

Please initial box

Name of Participant ______________________ Date __________________________ Signature ____________________

Researcher ____________________________ Date __________________________ Signature ____________________

For an independent opinion regarding the research and the rights of research participants, you may contact a staff member of the National University of Singapore Institutional Review Board (Attn: Mr Chan Tuck Wai, at telephone 6516 1234 or email at irb@nus.edu.sg).

When completed 1 for participant; 1 for researcher
Appendix 9
Interview Guide for government officials and university dignitaries and faculty
Version 1 – 01/09/2009

Study: Factors Influencing the Development of Advanced Practice Nursing Roles in Singapore

Welcome and Introduction to the Interview
All interviews began by introducing me as a Sheffield Hallam University, UK doctoral student. I will continue with an introduction to the nature of the study along with conversation to build rapport with the participant.

Phase Two Interview Guide – Representatives of governmental agencies and university departments
Objectives
- Capture the participants’ perspectives on drivers for APN development in Singapore.
- Obtain viewpoints on the processes, facilitators and challenges of role development.
- Collect contextual information relating to the networks of communication, processes of information exchange and linkages among decision makers.

Topic Agenda
- Nature of their role and how they have been associated with APN development in Singapore.
- Their perspective on factors contributing to APN development in Singapore.
- Depiction of types of decisions they are aware of that were made to related to APN development.
- Individuals they know of who made decisions regarding policies influencing APN development.
- Networks of communication know to them among decision makers.
- Their understanding of how decisions related to policy and APN development were disseminated.
- Their perspective on facilitators and challenges faced in development of APN roles in Singapore.

Close
Thank you.

Appendix 10
Dear (name)

**Research project: Factors Influencing the Development of Advanced Practice Nursing Roles in Singapore**

My name is Madrean Schober and I am writing to invite you to participate in a research study investigating the factors influencing the development of advanced practice nursing roles in Singapore. In addition to my position as Visiting Fellow at the Alice Lee Centre for Nursing Studies, National University of Singapore I am also undertaking doctoral study at Sheffield Hallam University, United Kingdom. As an international consultant I have had a longstanding interest in the development and implementation of APN roles.

I am approaching you as someone who has knowledge about APN development in Singapore and may be interested in participating in the study. I am most interested in gaining the perspective of health system managers and physicians who have experience in the implementation of APN roles. It is my understanding that you have been involved in this process.

You are under no obligation to participate in the study but I would very much appreciate your contribution. A copy of an information sheet which provides details of the study and what your participation would entail is enclosed. Please read this in order to help you decide whether you wish to take part.

I will contact you shortly to discuss what your participation would involve and answer any questions you may have. In the meantime, if you have any immediate questions regarding the study please contact me by phone at 6516 7454 or email me at nurms@nus.edu.sg

Yours sincerely,

Madrean Schober  
Doctoral Student  
Sheffield Hallam University, United Kingdom
Appendix 11
Interview guide for managers and medical staff
Version 1 – 01/09/2009
Study: Factors Influencing the Development of Advanced Practice Nursing Roles in Singapore
Welcome and Introduction to the Interview
All interviews will begin introducing by myself as a Sheffield Hallam University, UK doctoral student. I will continue with an introduction to the nature of the study along with conversation to build rapport with the participant.
Phase Three Interview Guide - Managers and medical staff
Objectives
To capture the perspectives of healthcare managers and medical staff on the facilitators and barriers to APN role implementation in Singapore.
To capture the understanding of managers and medical staff on policy as it relates to APN development in Singapore.
Topic Agenda
Nature of their role and how they have been associated with APN development in Singapore.
Their understanding of the policies related to APN practice in Singapore and how they came to know about them.
Facilitators and barriers as they understand them to APN development in Singapore.
Lessons learned that they feel might be helpful to others developing and implementing APN roles.
Close
Thank you
Dear (name)

**Research project: Factors Influencing the Development of Advanced Practice Nursing Roles in Singapore**

My name is Madrean Schober and I am writing to invite you to participate in a research study investigating the factors influencing the development of advanced practice nursing roles in Singapore. In addition to my position as Visiting Fellow at the Alice Lee Centre for Nursing Studies, National University of Singapore I am also undertaking doctoral study at Sheffield Hallam University, United Kingdom. As an international consultant I have had a longstanding interest in the development and implementation of APN roles.

I am approaching you as an APN or APN intern with knowledge about APN development in Singapore who may be interested in participating in the study. Your perspective on implementing the APN role in your clinical setting is of interest to me in order to gain an understanding of the realities of what you face on the ground as you work to introduce a new nursing role in Singapore.

You are under no obligation to participate in the study but I would very much appreciate your contribution. A copy of an information sheet which provides details of the study and what your participation would entail is enclosed. Please read this in order to help you decide whether you wish to take part.

I will contact you shortly to discuss what your participation would involve and answer any questions you may have. In the meantime, if you have any immediate questions regarding the study please contact me by phone at 6516 7454 or email me at nurms@nus.edu.sg

Yours sincerely,
Madrean Schober
Doctoral Student
Sheffield Hallam University, United Kingdom
Information Sheet for APN and APN Intern Participant Observation and Interviews
Factors Influencing Advanced Practice Nursing Development in Singapore

I am inviting you to take part in a research study. Before you decide if you are going to participate it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully and discuss it with others if you wish. Contact me if there is anything that is not clear or if you would like more information - my contact details can be found at the end of this sheet. Please take time to decide whether or not you wish to take part.

Thank you for reading this.

What is the purpose of the study?
I am a doctoral student at Sheffield Hallam University, United Kingdom. I am seeking to investigate the factors that have influenced APN development in Singapore. The research aims are to:

- To analyse policy drivers that provided momentum for introducing APN roles in Singapore.
- To investigate how policy directives have influenced the development of APN roles in Singapore. This will be examined from the perspective of a range of decision makers*. Areas to be considered include: role definition, scope of practice, education, standards, regulations, interaction with other health professionals and professional leadership.
- To explore the experiences of a sample of key decision makers and APNs in Singapore in order to identify how policy intentions were implemented in practice.

Note: * decision makers as used here denotes a range of stakeholders that will include but not be confined to government officials, chief nurses, nurse administrators/managers, nurse educators, university officials/administrators and physician educators/administrators.

Why have I been approached?
You have been approached as an APN or APN intern working to implement an advanced practice nursing role in Singapore.

Do I have to take part in the study?
No, participation is voluntary. It is up to you to decide whether or not to take part in the study. If you decide to participate you will be given this information sheet and be asked to sign a consent form. One copy of the consent form will be given to you and an additional copy will remain with the researcher. If you decide to take part in this study you are still free to withdraw at any time without giving a reason.

**What will be involved if I agree to take part?**

I would like to invite you to be shadowed by me for three days at your convenience. This will involve observing your everyday practice in order to gain an understanding of different aspects of your role in your clinical setting. When observing, I will be sensitive to the clinical setting and will withdraw from any situations in which you, or any of the people with whom you are interacting, prefer me not to be present.

Before undertaking a period of observation I would like you to raise awareness of the study among individuals and groups with whom you may have contact and provide the opportunity for them to decline to be observed. I will provide information about the study for you to share with them. In order that people with whom you have contact do not feel pressured, I would ask that whenever possible, you obtain agreement in advance from anyone who you anticipate you might encounter during the period of observation. If this is not possible, then I would ask you to obtain agreement on an on-going basis during the period of observation. I will withdraw from any situations where you or the person you are interacting with prefer me not to be present. During the period of observation I will not be seeking any information from anyone with whom you have contact.

Prior to the observation periods I would like to schedule an interview with you to become familiar with you and your clinical site. Following the periods of observation I would like to undertake a follow-up interview to discuss issues raised during the observation periods. The interviews will last approximately 1 hour and will be arranged for a mutually time and venue separate from the periods of observation. The interviews will be tape-recorded with your agreement. It will then be transcribed and analysed by me. The interview will explore topics related to the research aims.

**What other information will be collected in the study?**

I plan to interview approximately 20 key decision makers who have been involved in APN developments in Singapore. I will also be interviewing and observing up to eight APN or APN interns in various roles and who work in a range of clinical settings in Singapore.

**Will the information obtained in the study be confidential?**

Yes. All information obtained will be treated as confidential and not disclosed to anyone other than myself. The interview transcripts will not contain any information which could identify you, your colleagues or the organisation in which you work. Pseudonyms will be used where appropriate. Some short extracts from the transcripts may be used in the thesis and publications but these will remain anonymous. During the observation periods I will be recording field notes based on my experiences in the clinical setting but these will not contain any information which identifies individuals or organisations.

**What if examples of unsafe practice are observed or raised during the interview?**

It may be that cases of unsafe practice or disclosure of sensitive issues which have not been resolved may be reported to the researcher during the interview. In these situations the researcher will act in accordance with the requirements of the Code of Professional Conduct.
Will anyone else be told about my participation in the study?
No, I will not disclose your involvement to anyone else. The report and publications arising from
the study will not identify any individuals who have participated in the study.

What will happen to the results of the study?
I plan to publish the findings in journals so that other people can learn from the work. If you
would like to receive a short summary of the research findings please inform me at the end of
interview or notify me at the address provided below.

Who is undertaking the research?
The study is undertaken by Madrean Schober, a doctoral student at Sheffield Hallam University
in Sheffield, England. The lead supervisor for the study is Professor Kate Gerrish at Sheffield
Hallam University. The second supervisor is Dr. Ann McDonnell at Sheffield Hallam University.
Professor Debra Creedy, National University of Singapore, is the local supervisor in Singapore.

What if I wish to complain about the way in which this study has been conducted?
If you have any cause to complain about any aspect of the way in which you have been
approached or treated during the course of this study please contact Professor Kate Gerrish,
Director of Studies, or Professor Debra Creedy, local supervisor in Singapore.

How do I find out more about the study?

Madrean Schober
Senior Visiting Fellow
Alice Lee Centre for Nursing Studies
National University of Singapore
Block E3A, Level 3
7 Engineering Drive 1
Singapore 117574
Tel: (65) 6516 7454
Email: nurms@nus.edu.sg

Professor Kate Gerrish, Director of Studies
Email: kgerrish@shu.ac.uk

Professor Desley Hegney, on site supervisor Singapore
Email: nurdgh@nus.edu.sg
Tel: (65) 6516 3109

please contact:

For an independent opinion regarding the research and the rights of research participants, you may
contact a staff member of the National University of Singapore Institutional Review Board (Attn: Mr
Chan Tuck Wai, at telephone 6516 1234 or email at irb@nus.edu.sg).
CONSENT FORM

APNs and APN Interns for Participant Observation and Interviews

Title of Research Project: Factors Influencing the Development of Advanced Practice Nursing Roles in Singapore

Name of Researcher: Madrean Schober

1. I confirm that I have read and understand the information sheet dated ......................... (Version ............) for the above study. I have had the opportunity to consider the information, ask questions and these have been answered satisfactorily.

2. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason, without my legal rights being affected.

3. I agree to take part in the above study.

_________________________ ____________________________ ____________________________
Name of Participant Date Signature

_________________________ ____________________________ ____________________________
Researcher Date Signature

For an independent opinion regarding the research and the rights of research participants, you may contact a staff member of the National University of Singapore Institutional Review Board (Attn: Mr Chan Tuck Wai, at telephone 6516 1234 or email at irb@nus.edu.sg).
Appendix 15
Interview Guide for APNs and APN interns
Version 1 – 01/09/2009
Study: Factors Influencing the Development of Advanced Practice Nursing Roles in Singapore

Welcome and Introduction to the Interview
All interviews will begin introducing by myself as a Sheffield Hallam University, UK doctoral student. I will continue with an introduction to the nature of the study along with conversation to build rapport with the participant.

Phase Four Interview Guide – APNs and APN interns
Objectives
To capture a perspective from APNs and APN interns of the realities of role implementation.
To gain an understanding from the perspective of APNs and APN interns of issues faced in the realisation of policy to implementation into practice in Singapore.

Topic Agenda
Their knowledge of why the APN role was created in Singapore.
Nature of their role and responsibilities as an APN or APN intern and how long they have been in the role.
Their understanding of policies in Singapore that affect their practice as an APN.
Details on how were they were informed of any policies affecting their role.
Identify facilitators experienced in Singapore in attempting to implement the APN role.
Identify barriers experienced in attempting to implement the APN role.
Identify other members of the health care team that they work with including relationship with other professionals and their view of their own autonomy.
Their vision for development of APNs in Singapore in the future.
Anything else you would like to mention related to APN development in Singapore.

Close
Thank You
Appendix 16

Review of Singapore documents
Categories and Subcategories
Doctoral Study Phase One

Factors Influencing the Development of Advanced Practice Nursing in Singapore
1. Vision
   1.1 Status of Profession
   1.2 Contribution to Nursing
   1.3 Value to Healthcare System
2. Impetus
   2.1 Why change is needed
   2.2 What led to change
3. Benchmarking
   3.1 Nursing
      3.1.1 International (Outside Singapore & Asia)
      3.1.2 Regional (Singapore and Asia)
   3.2 Medicine
      3.2.1 International (Outside Singapore & Asia)
      3.2.1 Regional (Singapore & Asia)
4. Regulations and Standards
   4.1 Role Criteria
      4.1.1 Title
      4.1.2 Definition
      4.1.3 Scope of Practice
      4.1.4 Competencies
   4.2 Education
      4.2.1 Academic
      4.2.2 Preparation for Role
      4.2.3 Funding
   4.3 Internship
   4.4 Certification
      4.4.1 Renewal
   4.5 Registry
   4.6 Career Structure
5. Nature of Practice
   5.1 Settings/Specialties
   5.2 Behaviours/Responsibilities
   5.3 Liability/Indemnity
6. Key Decision Makers
   6.1 Government
      6.1.1 Ministry of Health (MOH)
      6.1.1.1 Chief Nursing Officer (MOH)
   6.2 Agencies specific to nursing
      6.2.1 Singapore Nursing Board (SNB)
6.2.2 Singapore Nursing Association
6.3 Institutions
   6.3.1 Education
   6.3.2 Employers of APNs
6.4 Other professionals
7. Support
   7.1 Anticipated
   7.2 Actual
8. Barriers/Obstacles
   8.1 Anticipated
   8.2 Actual
9. Gatekeeper Effect
10. Workforce Planning
11. Impact/Outcomes
    11.1 Anticipated
    11.2 Actual
12. Growth/Future Implications
Appendix 17

Phase One Review of Documents Thematic Matrix
<table>
<thead>
<tr>
<th>Themes &amp; subthemes</th>
<th>Theme Summary</th>
<th>Quotes</th>
<th>Comment</th>
</tr>
</thead>
</table>
| 1. Vision         | The review of documents reveals a vision by government, institutions, professional bodies, employers and nurses themselves of a new and dynamic healthcare environment associated with APN development. | "advanced practice nursing is on the move"[doc30,p2,para2]  
"groundbreaking"[doc31] | Is the old level nurse of a different status than the new nurse level?  
Pioneers of a new era of nursing in Singapore.  
Is general nursing of lesser value than advanced practice nursing? |
| 1.1 Nursing       | Consistently there is a subtheme that the introduction of APN roles & related ‘upgrading’ of education to the MN level will develop and elevate the nursing profession in Singapore to greater heights thus ‘raising the status’ of nurses. The success of nurse practitioners in the United States where APNs are viewed to be confident in their roles and highly regarded and respected by nursing and medicine appears to have contributed to this vision. | "new level of nurses" [doc 1, p. 1, para 1]  
"pave the way for advanced practice nursing in Singapore " [doc 1, p. 1, para 1; doc9, p1; doc10,p36]  
"expand nurses’ role" [doc5,p.3, top of page]  
"autonomy & empowerment in patient care” [doc5, p13,top of page]  
"recognition and respect from other healthcare professionals" [doc5,p.14, top of page;doc9,p4]; doc 36]  
"nurses have never been fully recognized by society and policy makers”[doc12,p43]  
"ardent wish” [doc13,p27]  
"elevate the standard of nursing to newer heights” [doc13,p27]  
"quest for nursing excellence”[doc8,p1]  
"expert or advanced practice nurses”[doc8,p1]  
"new ways of knowing” [doc9, p5]  
"APNs themselves need to proactively demonstrate their contributions to outcomes so as to attain role recognition” [doc10,p38]  
"changing the status quo” [doc17, p. 878]  
"nursing is not identified for many school leavers in Singapore as a first preference career choice. Perhaps, this is partly because |
nursing is undervalued when studied at the diploma.” [doc17, p. 876]

"changing of attitudes towards the acceptance of nursing as a profession of equal standing to its health care contemporaries." [doc17, p. 878]

"nursing is taking on a new role" [doc17, p. 878]

"to further advance the standing of nurses in Singapore" [doc18, p2,para 6, yellow highlight]

"the Ministry of Health (MOH) has announced various initiatives to enhance and develop nursing as a profession." [doc18, p2,para 6, yellow highlight]

"train nurses to take on higher value-added roles including that of junior doctors” [doc21, p. 2]

The trend to seek APN training “raises the status of the nursing profession” [doc22, p.1]

“internalization of…lowly status by the nurses themselves” [doc27, p. 38]

“relegated to the role of the physician’s handmaiden” [doc27,p. 38]

“nursing is considered as subservient to medical care” [doc27,p. 38]

"An NUS study (2004) shows that nurses in recent years still feel trapped in their roles as the doctor’s handmaiden." “75.9% of nurses polled perceived nurses as incapable of independent decision making (Tan, 2004)"[cited in doc27]

"recognition of the dedication and nursing leadership” [doc28,p. 1]

"transforms nursing practice” [doc28,p. 3]

"An APN is at the highest level in the clinical track for nursing and is viewed and respected as an
| 2. Contribution to Nursing | Development of advanced practice nursing in Singapore is expected to provide new opportunities and challenges for nurses to demonstrate the value of nursing and thus contribute to the professional culture. The expansion of nurses' roles and establishment of a clinical career path presents possibilities beyond traditional hospital nursing presenting a new role in healthcare delivery. Advanced education resulting in APN roles for a variety of practice settings and specialties is seen as shaping nursing's future in Singapore. Nurses of the future are envisioned to have a higher level of theoretical knowledge supporting their ability to make critical decisions and manage complex patients. The development of clinical skills is viewed as occurring at a sophisticated level in order to respond to future challenges in healthcare for the benefit of Singaporeans. | "pave the way for APN in Singapore" [doc1,p1,para1] "marks a milestone [re APN regulations]… The APN initiative… good step for many more important milestones" [doc3, p5, para1] "good step…for the profession" [doc 3,p.5,para 3] "Education of other nursing staff and health professionals through role modeling, mentoring and sharing of knowledge and expertise" [doc2, p1, para 2] "opportunity to develop … clinical role" [doc8,p1] "capitalise on nursing strengths"[doc8, p2] " opportunity [for nurses] to obtain higher qualifications locally"[doc8,p2] "The absence of a clear commitment to nursing and a nursing philosophy may result in APNs sacrificing their nursing roots and adopting the world views of others."[doc9,p5] "opportune time to pioneer and define advanced practice nursing for the future"[doc9,p6] |
| --- | --- | Historically registered nurses in SG have had to leave the country to seek higher education beyond the diploma level. Seems contradictory: on the one hand that there is a view to establish APN to keep nurses at the bedside contrasted with a view to expand nursing beyond the traditional hospital nursing role. |
| “building on professional nursing socialization is essential.” [doc 9,p.5] |
| “retention of clinically competent nurses at the bedside in SG” [doc10,p36] |
| “new opportunities and challenges for nurses to demonstrate the value of nursing” [doc12, p. 48] |
| “allowed for RNs to be developed into APNs” [doc 14, p.1] |
| “the value of nursing” [doc12, p. 43] |
| “The challenge now is for the nursing profession to prepare itself to take on a leadership role to improve the health of the populations” [doc12,p. 43] |
| “nurse centre for healthy ageing is a concept that integrates the principles and practice of community nursing, nurse practitioners, nurse-led clinics, advanced nurse practice and community care management” [doc12, p. 43] |
| “golden opportunities for nursing” [doc12,p. 45] |
| “new exciting milestone for nursing in Singapore” [doc13,p. 25] |
| “nurses on the clinical track will be able to venture into new territories like never before”. [doc15, P. 2, para 2] |
| “nurses have increased options and flexibility” [doc15,p2] |
| “career enhancing setting for the professional nurse who desire to develop in bedside nursing“ [doc15, p. 2] |
| ALCNS (re education) “is tasked with envisioning different futures and outcomes for nursing in Singapore and in the region as it leads the way in the development of graduate and
postgraduate education, research and clinical innovation” [doc17, p. 875]

“need nurses who can critically and efficiently translate clinical evidence into practice” [doc17, p. 878]

“for these students and future prospective nurses, NUS has provided a higher education pathway” [doc17, p. 876]

MOH has announced various initiatives to enhance and develop nursing as a profession.” [doc18, p. 2]

“new initiatives come on top of a review of nurse’s salaries structure last year” [doc18, p. 2]

MOH “recognizes the potential for some registered nurses to take on added responsibilities” [doc22, p. 1; doc23, p.1]

“future models will place a huge value on nurses in the management and prevention of chronic diseases: a fact that cannot be ignored when considering the future of nursing in Singapore. Undeniably Advanced Practice Nurses will be key players” [doc26, p. 2]

“improve quality of nursing care in SG” [doc26, p. 1]

“nursing must be empowered through a redefinition of scope of nursing” [doc27, p. 38]

Redefinition of ‘Nursing’: More Than a Calling” [doc27, p. 38]

“pioneer” [doc28, p. 2]

“transforms nursing practice to one where nurses engage critical inquiry and analytical clinical decision-making and assessment in the patient care management process” [doc28, p. 3]

“modernising nursing” [doc36]

“Moving nursing forward with Advanced Practice” [doc38, p. 1]
| 2. Healthcare System | Numerous leaders and key decision makers envision a healthcare transformation in Singapore that includes APNs. Institutional plans for new hospitals include patient-centric concepts that are associated with APN roles. The data suggests that APN development of specialisation and related skills is valuable to healthcare institutions in the delivery of healthcare services and in the development of ‘excellent healthcare systems’.

| | “ability to influence clinical care” [doc5, p13,midpage]

| | “modern health care systems”[doc10,p36]

| | “achieve ‘Successful Ageing for Singapore’(national agenda)[doc12, p44]

| | “nurses must strike while the iron is hot, be ready to lead the community to better health.” [doc12,p48]

| | “The challenge now is for the nursing profession to prepare itself to take on a leadership role to improve the health of the populations”

<p>| | “nurse centre for healthy ageing is a concept that integrates the principles and practice of community nursing, nurse practitioners, nurse-led clinics, advanced nurse practice and community care management”[doc12,p43] | Nursing as part of the bigger picture |</p>
<table>
<thead>
<tr>
<th>2. Impetus</th>
<th>(a driving force)</th>
<th>The need to establish a clinical career path for nurses emerges as a prime need.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1 Why change is needed</td>
<td></td>
<td>&quot;Improve patient outcomes&quot;</td>
</tr>
</tbody>
</table>

"wish that in Singapore the APN becomes an integral part of the healthcare team;"

"adding sophistication to Singapore's healthcare system" [doc18, p. 1]

"a robust healthcare system... no longer merely about doctors, nurses and their patients... now a complex system comprising many players with a diverse range of skills" [doc18, p. 1]

"we must be open-minded" [doc18, p.1]

"momentum in hiring more healthcare professionals and enhancing the infrastructure" [doc18, p. 2]

"dynamic environment offering significant opportunities" [doc18, p. 2]

"redefine healthcare practice" [doc18, p. 3]

**accept change**

"constant changes predicted in healthcare for the foreseeable future" [doc26, p. 1]

"let us seize this opportunity to restructure aspects of our healthcare delivery systems" [doc38, p. 7]

"potential to be key players in the provision of... healthcare services in Singapore" [doc10, p. 38]

Implies we are all on a path or journey together.
<table>
<thead>
<tr>
<th>Practical reasons for introducing the MN programme.</th>
<th>APNs are part of the changes the HM suggests.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>aim for launching APN roles and the APN education programme. Good clinical nurses, historically, have only been promoted to managers or educators and thus were lost to the system as clinical nurses. Data from the documents reveals nurses’ desire to expand their scope of practice and remain within the clinical arena rather than move to teaching or administrative positions thus identifying this desire as pivotal to the push for change.</strong></td>
<td><strong>Filling a gap or contributing</strong></td>
</tr>
<tr>
<td><strong>Additionally, the data suggests a need for nurses such as APNs to fill in various gaps in healthcare service provision that includes management &amp; coordination of care in various settings in order to provide better healthcare services in Singapore.</strong></td>
<td><strong>APNs</strong></td>
</tr>
</tbody>
</table>
### 2.2 What led to change

The MOH recommended a new clinical career track for registered nurses to progress in their career & remain in clinical practice thus establishing a clinical career pathway for nurses that led the way for or solidified actual changes that followed (education, registry, amendment to Nurses & Midwives Bill, internship, certification).

In addition, interest in APN roles to meet needs in both acute and primary care settings in order to improve patient outcomes with the least cost, shift in focus of healthcare from illness to prevention, from acute care to primary care provided momentum for the changes. CAI recommended that the govt. explore new models of primary care delivery that included APNs as an option in the healthcare workforce. Nursing was in a position to identify how to fill the gaps & to collaborate on a scheme for education and role development.

- **“Provide cost effective coordinated services”** [doc26, p. 2]
- critical that SG has an adequate pool of ‘appropriately prepared nurses’ [doc27, p. 35]
- “provide ‘right site’ care; expand nurse’s role, establish clinical career path for nurses” [doc36, p. 3]
- “ holistic and comprehensive care approach” [doc47, p. 23]

### 3. Benchmarking

- **“Driven by these factors [see list of 3 factors under impetus], Singapore’s Ministry of Health, in conjunction with the National University of Singapore” … introduced an education programme.”** [doc9, p. 1]
- **“rapidly ageing population”** [doc12, p. 43]
- shift of focus in healthcare from illness to prevention, from acute care to primary care, coupled with the advancement of nursing education” [doc12, p. 43]
- “Govt policy wants to encourage all chronic diseases be managed in the community by family physicians to shift the focus from episodic care to continuing care. Nurse consultant at the nurse centre is well placed to take on this role” [doc12, p. 46]
- “In some cases develop new services… e.g. pain management where there are not enough doctors available to provide such a service” [doc23, p. 2]
- “resurgence of interest” [doc30, p. 1]
- “seizing the opportunity” [doc30, p. 1]
- “need for greater investment in human resources for health” [doc34, p. 4]

It is not explicit that there are gaps in care or unmet service needs that APNs will provide. The need for change in general repetitive interests articulated at the international level albeit there may be a case that multiple SG settings could benefit by APN roles.

One article used the title ‘nurse consultant’ when referring to the APN role.

Policy influence in that nursing “was in a position” to develop the role as well as the education.

Note the overall comment on the need for a change in the “skills of the workforce”.
(process of comparing performance to another that is widely considered to be a standard or best practice).

<table>
<thead>
<tr>
<th>3.1 Nursing</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>3.1.1 International (Outside of Asia and Singapore)</strong></td>
</tr>
<tr>
<td>The definition, scope of practice &amp; competencies referred to in the Singapore documents are adapted from the International Council of Nurses (ICN) guidelines for APNs. APN MN curriculum development is aligned with the American Association for Colleges of Nursing (AACN) MN guidelines in the USA &amp; other USA documents. Role development is benchmarked against APN/NP models in the USA, UK, Australia, NZ and driven by factors cited in the international literature e.g. link between APNs &amp; decreased mortality &amp; morbidity, decreased length of stay in hospitals, cost of healthcare &amp; decreased readmissions to hospital supporting a view that APNs offer a beneficial service &amp; fill a gap in health care provision. Consultation and visiting lecturers from the USA were utilised for curriculum development &amp; introduction of MN modules. APN students do an overseas attachment as part of the MN programme (usually in USA) suggesting that international experiences will demonstrate the effectiveness of APNs.</td>
</tr>
</tbody>
</table>
| "aligned to international practice" "nursing practice to remain relevant" [doc3, p.5, para 3] "merging of U.S. based Clinical Nurse Specialist & Nurse Practitioners roles" [doc 5, p. 6, top of page] "In an effort to develop a role for expert or advanced practice nurses, we are looking at the practice in US, UK, Australia and New Zealand." [doc8,p1] The question is posed as to what is … “the appropriate model for advanced practice nurses in Singapore?” [doc8,p2] "Internationally advanced practice nursing has evolved over 25 years to become an important component of modern health care systems"[doc9,p1] "A study in the US concluded that nurse practitioners, the equivalent of nurse clinicians, render care that is equivalent to the quality of care offered by the physician" [doc27, p.39] Curriculum based on "Essentials of Master's Education for Advanced Practice Nursing" by AACN in USA.[doc9, P. 1] "requested assistance from USA: UCSF, UPenn and U Washington"[doc11,p 6] Referring to overseas USA attachment “NPs there had their own practice case load and practiced independently with available consultation from the attending physician” [doc 13, p. 26] "Benchmarking against other programmes also provides a
platform from which programme success and any potential need for reforms in relation to the progress of leading regional institutes can be measured” [doc17, p. 878]

Singapore striving to develop as a health hub with "nursing as a regional leader with an international reputation", [doc35, p. 591]

"Although international experience will tend to dictate the role for APNs here in Singapore we must review our own needs and wants and position APNs so that their potential will be optimized within the framework of healthcare delivery in Singapore “ [doc38, p. 6]

| 3.1.2 Regional (Refer to Singapore or Asia). | No data was found that revealed benchmarking to other APN roles or education in the region. |  |
| 3.2 Medicine |  |
| 3.2.1 International (Outside of Asia/ Singapore) | No data revealed comparison to medical care outside of Singapore as a benchmark for APN development. | 02.04.2010: On the positive side the international benchmarking is against international nursing practice. |
| 3.2.2 Regional (Refer to Singapore or Asia). | Reference is made to the medical profession in SG suggesting that institutions like the Academy of Medicine & College of General Practitioners could be good models for nursing professional development. There is consistent comparison of APN roles to medical care & provision of care similar to junior doctors but at the local (SG) level. "there is much nursing can learn from the medical model of professional development”[doc8,p1] "top-notch nurses who take on the role of junior doctors”[doc 21, p1] "complement the care provided by doctors” [doc22, p. 1] Should nursing emulate medicine & if so what is lacking in SG professional nursing that should be developed? Professional institutions? Benchmarking against medical model. |
| 4. Regulation & Standards | The SG healthcare regulatory framework consists of the regulator (MOH plus its statutory boards) & the regulated (public & private providers). Healthcare professionals are self-regulated by their relevant professional bodies – SNB for nursing with the establishment of committees to over see legal/regulatory criteria. Nurses and Midwives Act (1999) amended in 2005 to make provisions for the registration & regulation of APNs. [doc10, p36; doc14] Legitimacy - Regulations lead to legitimation Punitive action for misrepresentation or poor performance. | ? of quality & public protection? |
| 4.1 Role Criteria | To practice as an APN in SG an RN must complete a SNB accredited MN programme. The application for APN certification follows completion of the internship and defines what the applicant is required to do: defines the area of clinical practice; describes the planned model & scope of practice. A candidate must obtain endorsement by Clinical HOD & DN; obtain the commitment of at least one named clinical supervisor; and complete administrative requirements. Following approval of application a 1 yr provisional certification is given in order to complete the internship & appear before an APN Review Panel. It is possible to obtain up to two 6 months extensions to proceed to be certified as an APN. No nurse or APN may practice without official SNB certification. |
| 4.1.1 Title | Singapore, through its regulations & standards, provides protection for the title ‘Advanced Practice Nurse’. Penalties for false assumption of title of nurse and false assumption of title of Advanced Practice Nurse are well defined. The ‘Nurse Specialist Register’ (terminology) has been deleted & replaced with the “Advanced Practice Nurse Register”. |

SNB is in the position to regulate standards for training & education of nurses & midwives including APNs. The establishment of an APN Register of qualified APNs further solidifies standards for APN practice.

“extend the functions of the Board to regulating the registration, qualifications, training, education, standards and scope of practice, professional conduct and ethics of Advanced Practice Nurses” [doc 25b, clause 4, p. 11]

An APN whose practicing certificate has been cancelled may be issued a practicing certificate as an RN instead. [25b, P. 14]

Nice clarification if the APN certificate is cancelled.

“Do I become an APN automatically after completing a master’s degree?” [doc 2, p2, para1]

“to be recognised as an APN, the nurse must fulfil a set of stipulation including a recognised master’s degree in nursing, completion of internship and verification of core APN competencies in the relevant specialty, completion of 12 case studies and recommendations from the Clinical Head of Department and Nursing Director of the employing institutions” [doc10, p. 36]

“called Advanced Practice Nurses (APNs)” [doc 1, p 1, para 1]

“‘Advanced Practice Nurse’ means a registered nurse who is certified as an Advanced Practice Nurse under section 32” [doc4, p. 1, para 2 top of page &12, para 3]

The title ‘Advanced Practice Nurse’ is restricted to Registered Nurses who are authorised by the Singapore Nursing board (SNB) to practice as APNs. The
| 4.1.2 Definition | Official & regulatory definitions adopted by the SNB exist for APNs in Singapore. Refer to quotes for definitions & some variation. | use of the title without authorization by the SNB is an offence. [doc10, p.36]  
“For the purpose of this paper we will call the Advanced Practice Nurse (APN) a Nurse Consultant.” [doc12, p45]  
“deleting the words ‘he is a nurse specialist’ …” and substituting the words ‘an Advanced Practice Nurse or is qualified to practise a specialized branch of nursing’” [doc 25b, p. 8]  
“With the amendment of the Nurses & Midwives Act, the title of ‘Advanced Practice Nurse’ will be protected, that is the title would be used by only those persons who are registered as APNs with SNB” [47, p. 23]  
Confusing move depicted here given title protection is so imbedded in regulation in SG. Interchanges titles throughout the article [one doc only that does this].  
In doing the interviews clarify the change in titles from nurse specialists to advanced practice nurse.  
Legitimacy  
No obvious title confusion as seen internationally. Agreed definition adapted from ICN.  
The ICN definition for APN was adapted for SG. |
clinical nursing to provide preventive and acute health care services to individuals. They work independently and collaboratively with the healthcare team.” [doc 15, P. 2]

As defined by the MOH “registered nurses who have the necessary qualifications, competence and experience to practise as an APN” [doc22, p. 1; doc23, p. 1]

“an Advanced Practice Nurse (APN) is independent in clinical decision-making. She evaluates, assess and conducts therapy to individuals, families and the community” [doc29, p. 2]

SNB definition to “What is an APN?” A registered nurse who

a) holds such qualification or has gained such special knowledge in a specialised branch of nursing as may be approved by the Board;

b) has such experience in that branch of nursing as may be required by the Board;

c) has fulfilled such further conditions as may be specified by the Board… shall be eligible to apply to the Board to be certified as an Advanced Practice Nurse. “ [doc43, p. 2]

The next slide continues with the official definition of APN that has been used throughout the other documents.

<table>
<thead>
<tr>
<th>4.1.2 Scope of Practice</th>
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<tbody>
<tr>
<td>Scopes of practice for the APN are provided in detail. Scope of practice covers the various APN activities in clinical practice: conducting comprehensive health assessments; ordering &amp; interpreting diagnostic tests, planning &amp; managing pts. With complex health problems, initiating treatment according to an approved protocol; education &amp; counseling of patients; consultation/collaboration with other professionals, clinical leadership &amp; inclusion of EBP with the clinical component of the role becoming the major</td>
</tr>
</tbody>
</table>

“diagnose, treat and manage… initiate and implement changes in the healthcare service… education of nursing staff and health care professional… initiate and coordinate nursing research” [doc 2, p. 1, para 2]

Opportunity to “expand or extend … scope of practice” [doc8, p. 1]

“appropriate role” [doc8, p. 2]

“ideal would be for APNs to merge their newly acquired medical skills with the distinctive components of the nursing profession” [doc9, pp 5-6]

“Nurse Consultants in the nurse centres are Masters prepared

Adapted from ICN

Somewhat different than the definition provided in other docs & by the SNB.

Official vs. various independent definitions in some docs
<table>
<thead>
<tr>
<th>4.1.3 Competencies</th>
<th>Detailed lists of core clinical &amp; professional competencies are provided in several documents with slight revisions on what % of time should be spent on the clinical role vs. the professional role [conduct research, EB approach; mentors &amp; teaches nurses; health advice; advocate; member of a healthcare team]. A candidate for certification must submit a competency checklist.</th>
<th>APN competency roadmap [doc43,p5]</th>
<th>Adapted from ICN See Doc 43 for numerous diagrams, definition of internship, APN certification interview</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.2 Education</td>
<td>The concept and support for an academic APN programme was initiated by MOH and provided by NUS with influence &amp; active participation of physicians in the education process and as lecturers. The SNB was positioned to accredit the programme that commenced in 2003 under the auspices of Yong</td>
<td>&quot;bridging&quot;[ doc5, p4, midpage] &quot;the importance of nursing education and training cannot be overstated&quot;[doc8,p2] &quot;Advanced practice nursing began in Singapore in 2003 with the commencement of the Master of Nursing programme at the National University of Singapore&quot;,[doc10,35]</td>
<td>Those who influence APN education potentially shape the role as it is developed &amp; implemented. Equating the introduction of the APN with the commencing of the education programme.</td>
</tr>
</tbody>
</table>

focus. Patient management & treatment is based on critical enquiry & analytical decision-making skills. clinical experts with strong knowledge base and specialisation in gerontology."[doc12,p45]

“hybrid” [doc11,p 19-20]

“Greater depth and breadth of knowledge; synthesis of data, complexity of skills and interventions” p. 1” “Prescriptive privileges... work in progress” [doc14, p. 16]

“Support for APN prescribing reduces: patient consult episodes & patient dissatisfaction; work duplication & public doubting of APN capabilities” [doc14,p. 16]

“the scope of care extends beyond that of a traditional nursing and encroaching on medical practice.”[doc15, P.2, para2]

“qualified to take over some duties traditionally carried out by doctors”[doc 19, p1,para2]

“provide consultation, order and interpret diagnostic tests, diagnose minor ailment, and furnish medications” [doc21, p. 1]
| Loo Lin School of Medicine, Division of Graduate Medical Studies (DGMS). | Due to budgetary constraints "decided to develop our own curriculum” [doc11,p6] |
| "Use the recommendations from AACN" [doc11,p6] | "Conceptual framework was based on Benner’s model" [doc11,p6] |
| "Developed curriculum and offered the program since 2003” [doc11,p7] | "Knowledge and the ability to accept change has been and will remain key factors for nurses to succeed in the increasingly developing healthcare environment” [doc26, p. 1] |
| "stay relevant within the evolving healthcare system” [doc26, p. 1] | "it is imperative that nursing education programmes themselves act as agents of change. In my opinion, nursing education in close collaboration with practice settings will shape the present and future of nursing in Singapore” [doc26, p. 1] |
| Move from apprenticeship scheme[doc27] | Nursing education at the university helps prepare nursing to deal with political issues.[doc27] |

| 4.2.1 Academic (higher education & the accrual of scholarly knowledge) | The APN MN programme began in 2003 as an – 18 month offering emphasising a change from hospital-based training to tertiary level academic education. The curriculum followed guidelines recommended by ICN & AACN [USA] for MN & APN education. |
| "master’s degree in nursing which is clinically focused” 
doc2,p1,para3] | "students will undergo a rigorous programme that aims to provide an academic and clinical foundation for Advanced Practice Nursing” [doc6, p4] |
| "Nurse graduates from overseas master of nursing programmes should complete the following…[doc 2, p 2, para 2 & 3] | "National University of Singapore, in conjunction with |
| Legitimacy Move from polytechnic education to university programmes. |
the Ministry of Health” [doc1, p1, para 1]

“objectives of the MN programme are to equip APNs with advanced knowledge, skills and competencies to perform health and physical assessments, including ordering and interpreting diagnostic tests, to manage patients in collaboration and consultation with other healthcare professionals, to perform as a clinical leader and to conduct nursing research and utilize evidence based nursing.” [doc13, p. 25]

“approved academic requirements by SNB for advanced education” [doc14, p. 5]

“future of nursing in a university environment” [doc17, p.875]

“the primary focus of any nursing programme must be to produce the first level RN who can work safely in any number of clinical environments” [doc17, p. 878]

“need nurses who can critically and efficiently translate clinical evidence into practice” [doc 17, p. 878]

“gives nurses better clinical and academic knowledge”[doc27, p.43]

“the pressure on their clinical seniors to re-train increases” [doc27, p. 43]

“cycle for advancing professional nursing” [doc27, p. 43]

“academic and clinical foundation for advanced practice nursing” [doc29,p. 2]

“landmark achievement in nursing education in Singapore” [doc38,p. 4]

An assumption that university education will help nurses deal with political issues.
| 12.2.1 Preparation for Role (practical activities or training leading to skilled behaviour) | The review of documents describes preparation with a clinical focus as emphasising the core values of nursing in order to provide knowledge & confidence for the APN to be directly involved in planning care of pts. | "prepares Registered Nurses to acquire specialised advanced education and clinical competencies" [doc 1, p 1, para 1]

"programme equips APNs with advanced knowledge, skills and competencies" [doc6, p5][similar in doc11,p.8]

"a training programme that would prepare good clinical nurses to become advanced practice nurses"[doc8,p2]

"acquire specialised advanced education and clinical competencies to provide health care in various acute care settings, including intensive care units" [doc9,p1]

"In order to function effectively in their role, APNs are prepared at a master’s degree level"[doc10,p37]

"objectives of the MN programme are to equip APNs with advanced knowledge, skills and competencies to perform health and physical assessments, including ordering and interpreting diagnostic tests, to manage patients in collaboration and consultation with other healthcare professionals, to perform as a clinical leader and to conduct nursing research and utilize evidence based nursing."

"MN course prepared them to be clinical leaders"[doc13,p25]

"course work and clinical practice aimed at preparing a select group of fully-funded RNs as APNs in adult care and mental health. “ [doc17, p. 877]

"formal training"[doc22]

"preparing registered nurses to assume a clinical role and to use research to improve patient outcomes" [doc29,p. 2] |

| 4.2.3 Funding | The MOH provides S$24,000/per student for academic fee (full tuition) | MOH “sponsorship” [doc | Feasibility | 09/04/2010 – Funding will
<table>
<thead>
<tr>
<th>1.4 Internship</th>
<th>During the internship the graduate of the APN programme begins the process to become a clinical care expert under the preceptorship of a senior physician learning skills that were not taught during the MN programme. The internship is under the supervision of physician preceptors and includes stipulation of clinical hours, + completion of case studies and recommendations from DN &amp; Head of Clinical Department. The internship must be completed prior to application for final completion of the certification process.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.5 Certification</td>
<td>Upon successful completion &quot;endorsement by the APN Certification panel&quot; [ doc2, p2,</td>
</tr>
<tr>
<td></td>
<td>6,p4,bottom page] continue but fees have increased to S$30,000/per FT student. 09/04/2010 At many levels there is strong financial support for nursing education in general in SG as well as APN. Access to funding continues &amp; shows no sign of stopping.</td>
</tr>
</tbody>
</table>
of the internship the APN candidate applies to the SNB to appear before a certification panel. The certification panel approves/passes or rejects the APN candidate. A table of required clinical hours is provided that details criteria for provisional certification & post certification status. If found to be negligent in the role an APN is required to surrender his certificate & must do so within 14 days of the cancellation or suspension of registration as an RN or certification as an APN.

There is intent to implement mandatory CNE for the renewal of the APN Practising Certificate but data did not reveal guidelines for this requirement.

4.4.1 Renewal

Stipulated clinical practice hours are required to renew the practicing certificate. Reference is made to a table of minimal duration of clinical practice required for renewal of Practising Certificate based on Benner’s Stages of Clinical Competence. The table is divided into 4 levels of clinical practice:

<table>
<thead>
<tr>
<th>Stage</th>
<th>Clinical Practice Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Only clinical practice that utilizes the competencies of the APN can be included for the clinical practice requirement. The clinical practice can include but is not limited to: managing the health care of a target group of patients at an advanced level, providing care to a target group of patients who are physiologically unstable, providing comprehensive advanced nursing services to a target group of patients in the...</td>
</tr>
<tr>
<td>2</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Year 1 – Internship (supervised practice- (Novice/Advanced Beginner _– equivalent to 40hr week also defined as 1040 hours (26 weeks)); Year 2 ( competent) 800 hours (20 weeks); Year 3 (Proficient) – 560 hours (14 weeks); Year 4 (Expert) 320 hours (8 weeks)</td>
<td>areas of health promotion, health maintenance, and health restoration, using a collaborative model of practice to provide direct services to target group of patients in a variety of settings” [doc2, p. 3, para 2]</td>
</tr>
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<tr>
<td>1.6 Registry (The compilation &amp; maintenance of a list of names of people who have met specified professional standards)</td>
<td>SNB maintains the APN Registry of who may or may not be registered as an APN. Additional details associated with the APN Registry define the appeals procedure; regulation of practice &amp; conduct; what the APN register means and how SNB regulates certification. The Registry provides the names of RNs who have the necessary qualifications, competence and experience to practice as APNs. Result of amendment to Nurses &amp; Midwives Act</td>
</tr>
<tr>
<td>4.6 Career Structure</td>
<td>The MOH established a clinical career structure for RNs in 2001 with related remunerations in order to retain nurses in clinical roles and open up an alternative promotion track. In the clinical career track the APN is placed at Level 2 &amp; can progress to Level 3 – at Level 3 APNs must maintain at least 20% clinical hours of direct patient care to maintain APN certification &amp; a place in the clinical path. “upon certification as an APN by the SNB you may apply to be an Associate APN with your employing hospital/institution. You will be given the opportunity to be promoted to APN after a minimum of one year of clinical experience following registration as an APN, on demonstration of good clinical leadership and competencies, and upon recommendation from your Director of Nursing and Clinical Head of Department” [doc2, p3, para 4]</td>
</tr>
</tbody>
</table>

Re progress to Level 3 “superior leadership performance & professional maturity; ready to accept increased leadership responsibilities in areas of clinical practice, education, research or administration and mentor younger nurses”[doc14,p12] “Opportunities exist in these nursing specialties and subspecialties.”[doc15, P. 2] “allow experienced and skilled nurses who have the necessary Legitimacy & sustainability Benner’s Novice to Expert thesis is used by the SNB as measured progress from APN internship to expert at 4 years post graduation. Previously trapped in history. Career enhancing setting. The modern woman with other career opportunities finds that nursing no longer is appealing but the female servitude prevails. The ‘Report’ recommended the nurse clinician role for career mobility as against educators & managers [doc27].
| 5. Nature of Practice | advanced qualifications to remain in the clinical setting without compromising their career development.” [doc23, P.2]  
“Nurses have traditionally progressed in their career by moving up either the management or the education track. …clinical experience and expertise are unfortunately lost when experienced and competent nurses are promoted out of the clinical areas to become managers or educators.” [doc23,P.2]  
In reference to the APN Register “help systemically develop a category of clinical nurses to become key players in Singapore” [doc 35,p. 592]  
Highest level in the clinical track[doc29]  
Past career structure [without a clinical path] has contributed to brain drain as nurses went overseas [doc35,p. 591] | Impetus to keep nurses in clinical practice or at the bedside yet dictates numerous other duties. Later on the clinical time to qualify as an APN was increased to 80 or 85%. Individual APNs are pioneers & champions of quality care. |
| --- | --- | --- |
| The nature of practice for APNs is associated with their ability to manage chronic stable conditions, high acuity situations and provide coordination for aging care. At times this is equated to the role of the junior doctor. The APN can potentially be a resource for triage nurses, provide referral to specialist doctors, initiate discharge instructions, present staff & pt education, participate in journal club and provide conference papers. Improved patient outcomes are linked to the ability of APNs to be involved in research projects. APNs are described as full partners in healthcare delivery & in the shaping of healthcare policies. | “At least 65% of the APNs’ time is allocated to the delivery of clinical care, with the remaining 35% spent on staff education, research, quality improvement initiatives and projects”  
“health assessments, monitoring of health condition and symptoms, working out with clients’ family physicians in the neighborhood, to monitor the health status and condition of the clients”[doc12,p45]  
“within the framework of collaboration the nurse consultant and family physician will see their clients independently and interdependently, supporting one another to fully use their separate and shared skills”[doc12, p. 46-47]  
“are authorized to take health histories and provided complete physical examinations; diagnose and treat many common acute and chronic problems; interpret |
laboratory and diagnostic results; furnish and manage medications and other therapies; provide health teaching and counseling to support healthy lifestyle behaviors and prevent illness; and refer patients to other health professionals as needed” [doc15, p. 2, para2]

"qualified to carry out some tasks done by doctors". “first APN in Palliative Care” [doc16, p. 7]

"nurse experts must become experts in nursing and not tasks that doctors no longer want to do for themselves and yet do not wish to fully relinquish” [doc27, p. 38-39]

“Certified APNs may be allowed to change specialty practice on a case-by-case basis, subject to approval by APN Accreditation Committee; Applicant has to request in writing stating: reasons for change; intended practice role; defined scope of practice; stated competencies; 1 ear supervision in new specialty under named clinical supervisor and endorsement of Head of Department/Director of Nursing is required” [doc43, p. 8]

5.1 Settings/Specialties

15 identified specialties/subspecialties likely to be options in SG for an APN are listed. These include: Acute (ICU, ER), medical/surgical (oncology, gerontology, cardiology, neurology) care, community care (polyclinics) MH (inpatient & outpatient) and palliative care. APN services are not meant to replace community based services that are already available but the data are not specific to definition of what this means.

“provide health care in a wide variety of acute care settings” [doc 1, p 1, para 1]

“currently being developed for four adult-based specialties…minor acute conditions and stable chronic conditions” [doc2, p1, para 4]

“Provide ‘right site’ care” “stabilize the clinical environment during change of Housemen and Medical Officers postings” [doc 5, p3, top of page; doc 11, p4].

“all areas of clinical practice – hospitals and the community”[doc8,p2]

“specialty-based; unit-based

An assumption that the doctor needs to see the pt. 1st to judge who is appropriate for the APN to see.

Speculation: implied vs. the reality of what specialties are being offered.

10/03/2010 Pediatrics is not offered as a specialty at any level-adult only.

Is the intention primary care?

Ambitious
<table>
<thead>
<tr>
<th>5.2 Behaviors Responsibilities</th>
<th>SNB regulates behaviour through reference to professional conduct &amp; ethics suitable for an APN. Working in collaboration &amp; partnership with physicians</th>
<th>“professional conduct and ethics”[doc4,p3(f)]</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>“collaboration and partnership with medical practitioners and other health care professionals”</td>
<td>Multifaceted role – all specialties.</td>
</tr>
</tbody>
</table>

Almost all the four major chronic diseases named & expected to rise are preventable.
& other health care professionals is reiterated throughout the document analysis with emphasis on collaborative multidisciplinary management & treatment provided by RNs who now have added responsibilities.

[doc 2, p1, para2]
“role modeling, mentoring, and sharing of knowledge and expertise”

“our preferred model [for SG] would be a role that is complementary to the physician”

“We shall capitalize on nursing strengths, for example, our holistic approach to care”

“The scope of practice will continue to evolve as the healthcare system, society’s values and perceptions change”

“renders care according to best practice evidence agreed upon by both collaborating physician and the APN. (Please attach relevant protocols/guidelines)”

“the APN is authorized to prescribe specific medications as agreed upon with the collaborating physician”

“Accepts accountability & responsibility for his/her own advanced professional judgement, actions & continued competence”

“work collaboratively with doctors”

“within the framework of collaboration the nurse consultant and family physician will see their clients independently and interdependently, supporting one another to fully use their separate and shared skills”

“the intern was granted the same privileges as a clinical associate”

“championed quality care for dying patients and implemented the ‘Integrated Care Pathway’ at Dover Care Hospice”

“take on the role of junior doctors”

“assist in caring for chronic
| 5.3 Liability/Indemnity | Liability/Indemnity coverage is provided by an APN's employer and is also available through SNA. The continuous advancement & expansion of the APN role is seen to correspond with an increase in medical-legal liabilities as APNs assume higher levels of responsibility. Employing institutions include APNs in existing insurance coverage; the APN remains protected by the current legal doctrine of vicarious liability. | “Who is liable for my practice as an APN?... covered by employing hospital/institution” or “Professional Liability Insurance coverage through the Singapore Nurses Association” [doc 2, p 3, para 6]  
“It is agreed that neither the collaborating physician nor, in his absence, his designee shall be liable for the actions or omissions of the APN with respect to his/her scope of work unless the APN is acting in accordance with the instructions or directions of the collaborating physician” [doc7,p.3]  
“sensitive approach should be taken toward determining liability” [doc27,p. 40]  
nurses who bear greater duties should also be prepared for a correspondingly enlarged sphere of liability” [doc27,p. 40] |
| 6. Key decision makers | “as policies trickle down the various hospitals and nursing schools, feedback and fresh proposals should be fed back up for consideration. This will create a virtuous cycle of good governance” [doc27, p. 41] | Policy >> “cycle of good governance”. |
| 6.1 Government | The amendment to the Nurses & Midwives Act required a pass by the Parliament and President of SG. MOH (April 2005) presented a bill to Parliament to establish a Register for APNs. | |
| 6.1.1 Ministry of Health (MOH) 6.1.2 Chief Nursing Officer (CNO) | Multiple activities & initiatives are linked to the MOH including: Setting up a Nursing Task Force in 1997 & President's Awards to APNs. In addition the MOH is seen to be working with healthcare institutions, organisations, professional associations, private GPs & other partners such as the Committee on Ageing Issues. | “In July 2001 the Ministry of Health recommended a new career structure for registered nurses” [doc8,p1] developed “a training programme that would prepare good clinical nurses to become advanced practice nurses”[doc8,p2]  
“MOH decided to offer a Master of Nursing”[doc11]  
nursing has many supporters, including the Ministry of Health” [doc17, p. 875]  
Top down launching of the educational programme – authority & interest contribute to both feasibility & sustainability.  
High levels of authority orchestrating change; unanticipated outcomes? 30/03/2010 In an effort to support the bedside nurse/clinical nursing was APN rally what was envisioned? [reflection on
| 6.2 Agencies (professional & regulatory bodies specific to nursing) | SNB became a statutory board in 2000 under the Nurses and Midwives Act. It develops & maintains standards for nursing practice that reflect the minimum requirements necessary to assure that the public is provided with safe and competent health care. As a regulatory board SNB credentials APN programmes, the individual in the APN role along with regulation of their practice & continuing education for APN. SNB oversees the internship process, regulates certification & registration. SNA is the professional nursing association and also provides liability insurance for the APN. SNA & SNB represent the Singaporean nursing community. | “the MOH will also more than double the funds for nursing scholarship…in order to provide more opportunities for career development for nurses. These scholarships will be for nurses working towards an advanced diploma or a basic or masters degree in specialised areas of nursing” [doc18, p. 2]

“The Board may with the approval of the Minister, make regulations to prescribe the offences which may be compounded: [doc25b,p, 9]

Re ageing population “recommends that the government adopts a holistic, family physician centred approach… Other recommendations include developing the range of community-based nursing services and enhancing the role of community case management” [doc12, p. 43] |

Providers of services to the APN as well as developers of rules, regulations, educational programmes. Regulatory committees can be related to support & sustainability as well as feasibility for role development.

old comment from Ang, see PhD diary

Success & sustainability linked to institutional support.

“Functions of Board [SNB]…to approve or reject applications for certification of Advanced Practice Nurse; to issue practicing certificates; to accredit-courses …for certification of Advanced Practice Nurses; to regulate standards for the training & education of …Advanced Practice Nurses; and generally to do all such acts, matters and things as are necessary or authorised to be carried out under this ACT [doc 4, p2-3 #8]

“having met necessary stipulations, APN interns are eligible to apply for registration as an APN from the Singapore Nursing Board”.

“recommends that the government adopts a holistic, family physician centred approach…” Other recommendations include developing the range of community-based nursing services and enhancing the role of community case management services” |
Re SNB authority “APNs are authorized” [doc15, p. 2]

“the board’s role appears to be to accredit nursing courses in Singapore for the purposes of registration and to support courses in Singapore that provide qualifications in nursing or midwifery, in addition to those required for registration and enrolment, and to accredit the institutions in Singapore offering these courses. The board also seeks to undertake the regulation of standards for the training and education of RNs, ENs, registered midwives and advanced practice nurses (APNs). However, there is no direction, at least on the SNB web site as to how one is accredited as a continuing education provider of nursing courses.” [doc 17, p. 876]

“Unfortunately, this new entity carried a relic of the past: a doctor was Chairman again” [doc27,p. 41]

“not a trite observation” [doc27, p41]

“iconic significance in the office of the Chairman”[doc27,p41]

SNB “is the body regulating nursing practices and to a large extent, nursing policy, since ‘SNB is conjoined to its sister Nursing Policy Unit at MOH at their heads with the Chief Nursing Officer holding the post of the Registrar in SNB and DMS as its Chairman.’ This is more than a simple choice of hairdos. If nursing is to break free of the manacles of physician servitude, it must happen at the top. Nurse must not only be given the opportunity to steer the course of their profession, they must be manifestly seen to do so. [doc27,P. 41]

Appears to be a system for credentialing courses but some ambiguity or a gap as to what this process is.

Argument was presented against having the Director of Medical Services as Chairman of SNB, however the Minister approved but failed to give us any rationale to substantiate this. [doc27, P. 41]

3.3 Institutional – Education

NUS, School of Medicine (Dean of Medical School & Director, DGMS) initially had authority over the APN education programme until

"National University of Singapore, in conjunction with the Ministry of Health, started an 18-month Master of Nursing programme" [doc1, p1, para 1]

Up till establishment of ALCNS top up or transition from RN to BSc were offered in offshore mainly distance learning courses.
its move to ALCNS in 2009. HOD ALCNS now has departmental authority but still functions under the Dean of the Medical School, NUS. NUS provides an academic education option for nurses in Singapore at the BSc, MN, MSc & PhD levels.

| 3.4 Employers of APNs (institutions employing APNs) | The review of documents suggests the supportive role was expected of employers. The related quotes best describe this expectation. | “the organization [employer] has a responsibility to play in creating a culture and working environment that values the professional growth of APNs and in promoting role clarity”[doc9,p6] |
| | | “institutions must recognise and reward…differences in nursing roles…by utilizing and compensating nurses according to their different education levels and competencies” [doc27,p. 36] |
| | | “IMH spearheaded a number of initiatives as part of the Ministry of Health’s National Mental Health blueprint”[doc28, p.3] |
| 6.5 Other professionals | Physicians have total responsibility over pt care management. In a CPA (collaborative practice agreement) between APN & MD the physician delineates what the APN can do as in is “allowed to treat”. | “The DGMS reserves the right to reject any application without assigning reason” Re diagnosis/treatment disagreements “ In the event where no consensus is possible, the decision of the collaborating physician shall prevail” [doc,7 p. 2] |
| | | “Both the APN and Collaborating Physician will review the agreement [CPA] annually or as deemed necessary”.[doc7] |
| 7. Support | As part of the healthcare team APNs require the support of peers & colleagues plus other healthcare professionals to be successful. A survey done of APN interns | “invaluable assistance of the enlightened leaders in the medical profession”[doc8,p2] |
| | | “understanding the APN role and its relationship to other roles within nursing and other health |
| | | What impact does this have on nursing & nursing education with the presence of physician lecturers? Will they present the medical model only & what happens with the
| 7.2 Actual | Physician provides medical direction for the APN as needed, available by phone or interactive consultation prn a collaborative backup physician provides backup consultation when 1st consultant is unavailable. Collaborative relationships with health care professionals, esp. physicians, are reported in a survey done on APN interns in the form of knowledge of APN role; support from nursing leadership; level of preparation for APN role. The APN programme includes physician lecturers based on a history of experience with physicians lecturing in other nursing programmes in SG. MOH is philosophically supportive of nursing in SG & APNs specifically as manifested in the funding of education tuition fees & passage of regulatory documents. | SNB “has made several changes over time to support nursing practice.”[doc3,p5,para 3] “Regulation 2006 was approved by the Minister of Health and came into operation on 1st July 2006. These dates were significant as it provides for the implementation of the Advanced Practice Nurse Register”. [doc3,p.6,para1] “support from physicians/surgeons; knowledge of the role of the APN; support from nursing leadership; level of preparation of the APN”[from APN intern survey][doc5,p.14] “results suggest that the APN interns, as they mature in their role, are working in close partnership with physicians and are assuming responsibility for tasks that had been performed by traditionally by doctors.”[doc9,p.5] “development of the APN role was done in collaboration with the HOD through frequent, model of physicians shaping the education of nurses? feasibility | Cited as support but also as lack of support in APN intern survey Taking over MD tasks could also be seen as role conflict. Dissociating the APN from nursing. Philosophical & funding support by MOH. |
| From a funding perspective the employer (hospital) pays full salary while a student is in the programme adding to the support for the APN student. | regular meetings” A collaborative agreement was made on the type of patients and conditions was allowed to treat, those she should not treat and those which needed immediate attention of a physician.” [doc 13,p26] |
| Merit Award – a badge (gold plated pin, design of honour) to be worn as part of the nursing uniform and S$200 – provide visible support to individual APNs. | Re nurses with advanced training “This is a trend which MOH encourages.” [doc22, P. 1] |

8. Barriers
Obstacles

| 8.1 Anticipated | The document review suggested a continuing tug-of-war between the medical vs. nursing model and that the development of APN roles may lead to a “collision course” with physicians. Further the data suggest that confusion & disagreement as to scope of practice for the APN will provide barriers to role implementation & possibly a potential for not only role conflict but also underuse & misinterpretation of the APN role. |
| “The family physician has total responsibility for decisions about patient management. Hence, the development of nurse consultants in primary care is a challenge to the traditional medical model of care delivery and must be treated with caution to minimize misunderstanding of the different professional role” |
| “are they [APNs] dissociating themselves from their nursing role….without conscious realization”? P. 5 “It is crucial for APNs to remember that they are first & foremost nurses, and advanced practice nursing arises from the nursing profession. Arguably, understanding and respecting the medical world view is important, and can help the APN incorporate new ways of knowing, making decisions and practicing. However, if the APN completely assumes the medical worldview the result is immeasurable loss of an enriched nursing role.” [doc9, P. 5] |
| “The family physician has total responsibility for decisions about patient management. Hence, the development of nurse consultants in primary care is a challenge to the traditional medical model of care delivery and must be treated with caution to minimize misunderstanding of the different professional role” [doc12, p. 46] |
| “Clarity of APN roles is important |
| Higher levels of authority by physicians & DNs who precept, recommend, endorse dictate the process. |
to APN development”[doc14]  
“encroaching on medical practice.” [doc15,P. 2]  
“Innovation in programme development must be justified by effective content delivery. Apart from this overriding concern, there may also be other constraints that limit innovation in curriculum planning. Regulatory board approval, adherence to university policies and the need to match market expectation with performance delivery are some of the considerations that may be taken into account when changing the status quo. Societal regulation and the culture of decision making in the government also influence issues regarding innovation and the MOH provides clear direction” [doc17, p. 878]  
“With an increasing number of medical specialists in Singapore many patients are being treated symptomatically. Specialised nurse clinicians may aggravate the situation” …also “leading to care being fragmented amongst various specialties” “case management provides a solution to this” [doc27,p. 40]  

Lack of clarity of the APN roles is therefore a barrier?  

<table>
<thead>
<tr>
<th>8.2 Actual</th>
<th>SNB has the authority to approve or reject APN applications, issue practicing certificates, accredit educational courses; accredit teaching institutions offering courses, regulate nursing standards/scope of practice. Emphasis on misconduct</th>
<th>[SNB] “generally to do all such acts, matters and things as are necessary or authorised to be carried out under this ACT”: “The Registrar may disclose, in accordance with any prescribed conditions, any information in the Advanced Practice Register to any prescribed person.”</th>
<th>Significant power &amp; authority over nursing.</th>
<th>The Registrar is the CNO. MOH</th>
</tr>
</thead>
</table>
including false assumption of titles & fraudulent registration.

Repeatedly data suggests that to deliver a nursing programme in SG there are system constraints of 1) university rules & regulations for approval in the context of onsite delivery & quality expected; 2) faculty must meet the parameters of the regulatory authority for programme accreditation.

“lack of knowledge of role of APN; lack of support from physicians/surgeons; inadequate level of preparation of the APN” [from APN intern survey][doc5, pp 14-15]

“Lack of role clarity, lack of support and inability to focus solely on clinical care were cited as barriers” [doc9,p.6] [survey]

**Barrier to full extent of practice re prescribing** – The Medicines Act Chap 176 Clause 29 on Medicinal products on prescription.
“states only ‘doctors, dentists and veterinary surgeons’ are allowed to prescribe” [doc14, p. 16]

“Nurses have traditionally progressed in their career by moving up either the management or the education track. …clinical experience and expertise are unfortunately lost when experienced and competent nurses are promoted out of the clinical areas to become managers or educators.” [doc23, P.2]

“the development of nursing professionalism is hindered by nurses themselves, the organisations they work for and broader social and healthcare policies leading to harsh working conditions: [doc27,p. 37]

“As the scope of nursing practice expanded to include tasks that were previously exclusive to the medical profession the restrictions placed on nursing by the combined effects of section 26(2) and section 17 of the MRA [Medical Registration Act] becomes increasingly untenable. .. the scope of nursing duties found in section 26(2) of the NMA (Nurses and Midwives Act should be expanded to include the core duties covered by the case managers and clinicians” [doc27,p. 39] “may include the competencies to give diagnosis and prescriptions”. [doc27,P. 39]

Noted is a change in perceived support, barriers & working relationships over time [survey].

Extensive regulation & regulatory authority by SNB.
APN needs to address differences so that parents & teachers understand the diagnosis and agree with the treatment...reinforce therapeutic goals at home and in the classroom” [doc29, p. 2]

The NUS study (Tan et al 2002) reveals that the limited ability of nurses to influence policies that affect them stands as a key barrier to professional development. [doc27]

9. Gatekeeper effect
(A gatekeeper controls access to something – e.g. monitors or oversees actions of others).

Physician preceptors, Head of Clinical Department & DN recommendations required at several levels for the APN candidate to proceed through education & qualifications. In practice the physician periodically reviews charts managed by the APN & the physician decision is final in the event of disagreement over case management.

SNB has the authority to approve or reject APN applications, issue practicing certificates, accredit educational courses; accredit teaching institutions offering courses; regulate nursing standards & scope of practice. Documents under the jurisdiction of SNB provide details on misconduct including false assumption of titles, fraudulent registration.

Employer approval is required all along the way from choosing the MN candidate to supporting through the internship to employing as independent APN.

Multiple steps in the certification process must be approved or endorsed by HOD & DN of the institution employing the APN.

SNB “generally to do all such acts, matters and things as are necessary or authorised to be carried out under this ACT”: [doc4, p. 3]

“The Registrar may disclose, in accordance with any prescribed conditions, any information in the Advanced Practice Register to any prescribed person.” [doc4, P. 13]

“The DGMS reserves the right to reject any application without assigning reason” [doc6, p. 7]

Re diagnosis/rx disagreement” In the event where no consensus is possible, the decision of the collaborating physician shall prevail” [doc7, p. 2, bottom of page]

“Both the APN and collaborating physician will review the agreement annually or as deemed necessary” doc 7. p. 3, para3]

“having met necessary stipulations, APN interns are eligible to apply for registration as an APN from the Singapore Nursing Board”.[doc9, P. 1]

APN is “allowed to treat” [doc13, p26]

“someone has to undertake the ‘gatekeeper role’ in practice regulation, curricula development and quality control, especially in a country where nursing is taking on a new role in healthcare delivery.” Doc17, p. 878]
“the Board may exercise any of the powers in subsection (2) if the Board is satisfied that an …APN” has obtained registration fraudulently, failed to comply with condition; convicted of an offense; misconduct; unable to perform, not renewed practicing certificate; is deceased. [doc25b, P. 1-2]

"the powers mentioned in subsection" [doc25b, p. 4]

to increase the range of disciplinary action that the Singapore Nursing Board (the Board) may take" [doc25b, p. 10]

"empower the Board to disclose information to prescribed persons" [doc25b, p. 10]

"vital that both co-exist in a dynamic relationship." “key roles in representing nursing” [doc27, p. 41]

SNB “is the body regulating nursing practices and to a large extent, nursing policy since SNB is conjoined to its sister Nursing Policy Unit at MOH at their heads with the Chief Nursing Officer holding the post of the Registrar in SNB and DMS as its Chairman. [doc27, P. 41]

All development for the MN programme & modules passed through or became “stuck” in DGMS either with the Director of DGMS or programme manager who was a full time employee of MOH & part time programme manager employed by NUS.

Details for offenses are punitive. ? of more clarity than needed for the role. SNB with absolute authority. Is it enforced & how.

Seems a bit primitive for misbehavior – protection of whom? Public?

Medicine present on the SNB – what is the rationale?
10. Workforce Planning

National action plan is strategized to maintain a proper understanding of labour statistics including a reexamination of the nursing workforce & how it relates to the healthcare system and a change of the skills in the healthcare workforce. The Health Minister has reiterated three key strategies progressing to jobs requiring higher skills in the public sector: 1) investing in clinical research; 2) integration of services in the long-term sector for patients to move hassle free from one sector to another; 3) add sophistication in line with changing needs, rising costs & rising patient’s expectation – looking to rapidly expand pool of pharmacists, advanced practice nurses, biostatisticians, bioinformatics experts, healthcare administrators & allied health workers.

“Promoting the concept [APN] must be carefully strategized to get buy-in from the medical fraternity, policy makers and the community at large”[doc12,p46]

No shortcut to “growing” APNs; space & time are needed to build clinical competencies; extreme challenges for broad clinical coverage; APN may niche a pt. subgroup; needs must be clearly identified for the APN to ID practice niche.[doc14,p. 23]

“increase nurse to population ratio from 1:249 to 1:220 by 2015. ‘increasingly the nurse-to-population ration is part of the strategy to enhance working conditions for our nurses, so...they will have more time to look after patients and have a better work-life balance’ [doc18,p. 2]

APNs are one option in healthcare workforce planning.

Value added to the healthcare workforce.

01/04/2010 There is no evidence of self selection to enter the education programme &/or to become an APN. All (selection, funding, employment) is all dictated by the SG system.
### 11. Impact/Outcomes

#### 11.1 Anticipated

| The document review expected an increase in numbers of expert nurses in all areas of clinical practice in hospital & community in Singapore to improve health care outcomes & fill in the gaps. | Improved quality indicators: greater patient independence; promotion of health; adjust to illness; compliance with treatment; patient satisfaction, reduced ED visits and rehospitalisations “positive patient outcomes” “reduced | 11/04/2010 | No mention of how this will be achieved, funded or evaluated. |

*“APN becomes more effective partner in the healthcare team…higher standard of nursing, counseling, education and health advocacy …comprehensive care”* [doc23, p. 2]

Without a proper understanding of “these deeply entrenched barriers, current short term solutions will only serve to sabotage future efforts: [doc27, P. 34]

“financial incentives must be explicitly linked to varied education and practice competencies nurses bring to patient care” [doc27, p. 36]

“lack of Palliative Care trained nurses to meet the demands of increased Palliative Care services: [doc33, p. 15]

“besides increasing numbers, the skills of the workforce must also change as chronic diseases become more prevalent with the aging population” [doc34, p. 4]

“hospital environments will require nurses and doctors taking on different roles” [doc35, p593]

“how can APNs position themselves and make a visible difference in healthcare” [doc38, p. 4]

Policy efforts continue to be geared toward adequate health care manpower to meet health care demands [doc34].

Building a case toward APN?

Note the overall comment on the need for a change in the *skills of the workforce*
<table>
<thead>
<tr>
<th>11.2 Actual</th>
<th>A growth in nursing numbers in general is happening in Singapore including numbers of APNs. Data suggests that the growth in numbers of APNs will be dependent on the demand for their services. Narrative descriptions indicate that physicians become APN supporters &amp; preceptors when they better understand the role and that patients are satisfied when they understand services provided by the APN.</th>
<th>&quot;nursing sensitive outcome are those that are relevant, based on nurses' scope and domain of practice and for which there is empirical evidence linking nursing inputs and interventions to the outcome&quot; [doc 44, p. 32] “hence to demonstrate the impact of APNs it is important to choose indicators that are relevant and based on the scope and domain of the APN practice and that there is evidence linking the interventions to the outcome. Failure to do so may result in missing impacts attributable to the APN role.” [doc44, P. 32]</th>
<th>Establishing credibility? Legitimacy?</th>
</tr>
</thead>
<tbody>
<tr>
<td>12. Growth Future Implications</td>
<td>Documents reveal that APN roles in Singapore are increasing; innovative roles are developing, practicing in a wide variety of settings but</td>
<td>“APN initiative…good step…to safeguard public safety and interest” [doc3,p.5, para3] “APN role still evolving; continue to develop innovative roles;</td>
<td>Currently (2010) the MN programme functions under ALCNS with the programme manager employed by NUS &amp;</td>
</tr>
</tbody>
</table>
| there continue to be a need to monitor development & outcomes in order to demonstrate effectiveness. The career enhancing settings with increased options and flexibility are appealing to young nurses looking to professional advancement. The trend for more RNs to seek advanced training recognizes the nursing potential in SG as Advanced Practice Nurses continue to be viewed as key players in the nation’s healthcare efforts for the future. | APNs are practicing in a wide variety of settings; continue to monitor development; monitor outcomes of practice; demonstrate the effectiveness of the APN role."[doc5, p. 15;doc36,p16]"

"the quest for nursing excellence will only end when we have sufficient numbers of expert nurses in all areas of clinical practice – hospitals and the community."[doc8,p2]

"Further research is needed to ensure that the benefits of having APNs are attained"[doc9,p6]

"The journey will never end…for the novice till she becomes an expert" [doc 13, p. 27]

"need to continue to refine roles to reduce role overloads and role confusion; the continuing tug-of-war…medical vs. nursing model" [doc14, p. 24]

"speed of change is definitely not going to slow down" [doc16, p.10]

"‘sharpen our saw’ through partnerships within our own nursing community" [doc16, p10]

"remain vibrant, renewed, focused and visionary" [doc16, p. 10]

"appears to be considerable room for growth and development of career structures, pay rates…and nursing research development. It is really an exciting time for nursing education in Singapore. “ [doc 17, p. 876]

"increasingly train and recruit healthcare workers" [doc18, p. 1]

"benefits patients through better nursing care & cost control" [doc22, p. 1]

"increasingly challenging roles required of the nursing profession": [doc26, p. 1] | situated within the nursing department. The 18 month course is now two years. There is currently no PT or online study options. In Feb. 2010 the curriculum is being revised with more specialties. The MSc research will shortly commence. |
<table>
<thead>
<tr>
<th>&quot;clear that advanced practice nursing is on the move in this area of Asia from the development of advanced practice programs, to legislation and regulation&quot; [doc30, p. 2]</th>
<th>Speculation but lit. support for this inconsistent &amp; no evidence yet for SG [24/03/2010]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indicating there might be more school based APNs in MH.</td>
<td></td>
</tr>
</tbody>
</table>
Appendix 18

Phase One Review of Documents Summary
Review of Document: January – April 2010

Introduction
Prior to the review of documents a comprehensive literature review was conducted exploring APN development internationally. The review of document provided a more in-depth examination of Singaporean documents to inform this study. See the Chapter 4 - Fieldwork in the thesis for a detailed account of conduct of the review of documents. A final thematic matrix was developed and used to inform Phases Two to Four of the study. Of the documents analysed only one journal article claimed to be a research study and questions of rigour arose in the analysis of this study. Government and institution reports were useful in gaining insight into the regulatory environment. Editorials, conference presentations and journal articles provided an understanding of APN development. Press releases and web portal announcements presented a focused effort as to what the public or media found significant about this new development in nursing. Even though enthusiasm for APN roles was conveyed consistently throughout the review of documents no documents were found that revealed intent of policy as it relates to the actual implementation of APN roles. Narrative articles focused on the satisfaction or dissatisfaction of the nurses as they saw themselves in the APN role but there was little data demonstrating satisfaction or dissatisfaction of the public or other professionals. A limitation of the document review was that five documents (journal articles and conference presentations) were developed or authored by the same person suggesting a possible bias in the data extraction process.

Documents Listed by Type

<table>
<thead>
<tr>
<th>Type</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Governmental Document</td>
<td>6</td>
</tr>
<tr>
<td>Agency Report</td>
<td>1</td>
</tr>
<tr>
<td>University Document e.g. curriculum</td>
<td>1</td>
</tr>
<tr>
<td>Institution/Employer Document e.g. collaborative practice agreement</td>
<td>2</td>
</tr>
<tr>
<td>Journal Article</td>
<td>8</td>
</tr>
<tr>
<td>Journal Editorial</td>
<td>4</td>
</tr>
<tr>
<td>Conference Presentation</td>
<td>6</td>
</tr>
<tr>
<td>Media Release</td>
<td>13</td>
</tr>
<tr>
<td>Web Portal Information</td>
<td>6</td>
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</tbody>
</table>

N = 47
Summary of Themes and Subthemes

**Theme: Vision** (looking forward toward a goal)

The review of documents revealed a vision by government, institutions, professional bodies, employers and nurses themselves of a new and dynamic healthcare environment associated with APN development.

**Subtheme: Status of Nursing** (position or rank within society)

Consistently throughout many of the documents there was a theme that the introduction of APN roles and the related ‘upgrading’ of education to the master’s level will develop and elevate the nursing profession in Singapore to greater heights thus ‘raising the status’ of nurses. Documents repeatedly made reference to the success of nurse practitioners in the United States where they are confident in their roles and highly regarded and respected by nursing and medicine.

**Subtheme: Contribution to Nursing**

The development of APN roles in Singapore was envisioned as contributing to the professional culture of nursing as distinguished from the status of nursing that requires a certain level of respect. Documents revealed that the development of advanced practice nursing provided a view that with the APN there would be new opportunities and challenges for nurses to demonstrate the value of nursing. There was a hope that the expansion of nurses’ roles and a clinical career path for nursing would present opportunities beyond the traditional hospital nursing roles thus including a new role in healthcare delivery for nurses. Advanced education based on various specialties was viewed as shaping nursing’s future in Singapore. As a result the nurses of the future would have a higher level of theoretical knowledge in order to make critical decisions and manage complex patients. The development of clinical skills would occur at a sophisticated level in order to respond to future challenges in healthcare for the benefit of Singaporeans.

**Subtheme: Value to the Healthcare System**

The review of documents portrays a clear picture of numerous leaders and key decision makers who envisioned a healthcare transformation in Singapore that included APNs. Institutional plans for new hospitals included patient-centric concepts that were becoming associated with APN roles. Documents further suggested that APN development in clinical specialisation and related skills would make a valuable contribution in the delivery of healthcare services.

**Theme: Impetus** (driving force)

**Subtheme: Need for Change**

The need to establish a clinical career path for nurses was commonly cited in documents as a reason why APN roles were needed in Singapore. Good clinical nurses, historically, were only promoted to managers or educators and thus were lost to the system as clinical nurses. Documents revealed that nurses’ desire to expand their scope of practice and remain within the clinical arena rather than move to teaching or administrative positions. Documents further suggested a place for nurses, such as APNs, to fill in various gaps in the Singaporean healthcare system. These include filling in the gaps when medical students transitioned through their medical education, gaps in primary care (GP...
clinics/Polyclinics); and the need to incorporate various specialties such as palliative care alongside chronic disease management.

Subtheme: What led to change?
Fundamental to promotion of APN development in Singapore were decisions, mandates and collaboration at the highest level of authority. A recommendation from the National Task Force on Nursing in 1999 advocated for nurse clinicians (terminology was changed to advanced practice nurse) as an alternative path for nursing career advancement alongside the career path for nurse educators and nurse administrators. At the parliament level an amendment to the Nurses and Midwives Bill was achieved that included regulations for advanced practice nurses. The Minister of Health (MOH) in 2001 recommended a new clinical career track so that registered nurses could progress in their career and remain in clinical practice. The development of this career structure required advanced educational preparation and led to collaborative decision-making between the MOH and National University of Singapore (NUS) that was pivotal to launching the academic programme. Nursing was in a position to collaborate in planning a scheme for APN education. Representation for nursing at the MOH level was the Chief Nursing Officer (CNO), also Registrar for the Singapore Nursing Board, who facilitated the change. There was a shift in focus of healthcare by the MOH from illness to disease prevention and from acute care to primary care with recommendations that the Singapore government explore new models of primary care delivery. In addition, the increase in building of hospitals, more spending on healthcare and an anticipated shortage of doctors, esp. in psychiatry and geriatrics, led to new ways in thinking of healthcare service provision.

Theme: Benchmarking (process of comparing performance to another that is widely considered to be a standard or best practice).

Subtheme: Nursing International
Supported by the MOH, a team consisting of the CNO, Directors of Nursing and other nursing leaders visited USA hospitals and medical campuses with university based schools of nursing. Their aim was to study APN roles to better understand how APNs are identified, developed, tracked and eventually deployed in the hospital, community and primary care settings. The visiting team talked to nursing leaders in the USA who manage the services (APN personnel). The exposure was envisioned to be helpful in strengthening a view of the curriculum, regulations, credentialing, privileging and licensing for APNs. The APN definition, scope of practice & competencies referred to in the Singapore Nursing Board documents are adapted from International Council of Nurses (ICN) guidelines. APN master’s curriculum development was aligned with the American Association for Colleges of Nursing (AACN) MN guidelines in the United States and other USA documents. Consultation and visiting lecturers from the USA were utilised for curriculum development and introduction of modules. APN students did an overseas attachment as part of the MN programme (usually in USA) suggesting that international experiences would demonstrate the effectiveness of APNs. Roles were benchmarked against APN/NP models in the USA, UK, Australia, New Zealand and driven by factors cited in the international literature that provided a link between APNs and decreased mortality and morbidity, decreased length of stay in hospitals, cost of healthcare and decreased readmissions to hospitals.
Regional
There were no documents found that indicated benchmarking against other nursing practice or APN roles in Asia.

Subtheme: Medicine
International
No documents were found that compared medical care outside of Singapore as a benchmark for APN development.
Regional
Data provides extensive benchmarking against the medical model of care in Singapore as a benchmark for APN role development. Reference is also made to the medical profession in Singapore suggesting that institutions like the Academy of Medicine & College of General Practitioners could be good models for nursing professional development.

Theme: Regulations and Standards
The Singapore healthcare regulatory framework consists of the regulator (MOH plus its statutory boards) and the regulated (public & private providers). Healthcare professionals are self-regulated by their relevant professional bodies – Singapore Nursing Board (SNB) for nursing with the establishment of committees to oversee legal/regulatory criteria. SNB is in the position to regulate standards for training and education of nurses and midwives including APNs. The establishment of an APN Register of qualified APNs solidified standards for APN practice.

Subtheme: Role Criteria
To practice as an APN in Singapore a RN (registered nurse) must complete a SNB accredited Master of Nursing programme. The application for APN certification follows completion of a minimum one year clinical internship. The application process defines what the applicant is required to do: define the area of clinical practice (specialty) and describe the planned model & scope of practice. A candidate must obtain endorsement by the Clinical Head of Department (HOD) & Director of Nursing (DN) from the sponsoring institution; obtain the commitment of at least one clinical supervisor and complete administrative requirements. Following approval of application for internship a 1 year provisional certification is given in order to complete the internship. Following completion of the internship the candidate appears before an APN Review Panel. It is possible to obtain up to two 6 months extensions to proceed to be certified as an APN if a candidate does not receive a pass on the first attempt. No nurse or APN may practice without official SNB certification and an APN license.

Title
Singapore, through its regulations & standards, provides legal protection for the title ‘Advanced Practice Nurse’. Penalties for false assumption of the title of ‘Advanced Practice Nurse’ are well defined. The ‘Nurse Specialist Register’ (prior terminology) has been deleted and replaced with the “Advanced Practice Nurse Register”.

Definition
Official and regulatory definitions adopted by the SNB exist for APNs in Singapore. The definition used in official documentation is an adaptation of the ICN (International Council of Nurses) recommended APN definition.

Scope of Practice
Scopes of practice for the APN were provided in detail in the regulatory documents and adapted from ICN guidelines. Scope of practice covers the various APN activities in clinical practice: conducting comprehensive
health assessments; ordering & interpreting diagnostic tests, planning & managing pts. with complex health problems, initiating treatment according to an approved protocol; education & counseling of patients; consultation/collaboration with other professionals, clinical leadership and inclusion of EBP(Evidence Based Practice) with the clinical component of the role becoming the major focus.

**Competencies**

A defined list of competencies (see subsequent section labelled Appendix A in this summary) is provided by SNB. The SNB defined core clinical & professional competencies with slight revisions over time on what % of time should be spent on the clinical role vs. the professional role [conduct research, mentor and teach nurses; health advice; advocate; member of a healthcare team]. A candidate who applied for certification with SNB was required to submit a competency checklist.

**Subtheme: Education**

**Academic** (higher education & the accrual of scholarly knowledge)

The concept and support for an academic APN programme was initiated by MOH and the programme was developed provided under the auspices of National University of Singapore (NUS). Influence and active participation of physicians appeared in the form of curriculum development and as lecturers in education modules. The SNB was positioned to accredit the APN programme that commenced in 2003 under the auspices of the Yong Loo Lin School of Medicine, Division of Graduate Medical Studies (DGMS). The APN MN programme began as an 18 month offering emphasising a change from hospital-based training to tertiary level academic education. The curriculum followed guidelines recommended by ICN and the American Association of Colleges of Nursing (AACN) for MN and APN education.

**Preparation for role** (practical activities or training leading to skilled behaviour).

Data from the review of documents described role preparation with a clinical focus emphasising the core values of nursing in order to provide knowledge and confidence for the APN to be directly involved in planning care for patients. This was defined as clinical practicum as part of the APN MN programme.

**Funding**

Philanthropic funding of 10 million dollars was provided by the Lee Foundation to establish the Nursing Department at NUS. The Alice Lee Centre for Nursing Studies currently oversees the APN MN programme. The Ministry of Health (MOH) provides S$24,000/per student for academic fees (full tuition paid per FT student) and the sponsoring employer pays a fulltime salary while the nurse is in the programme.

**Subtheme: Internship** (practical experience in a chosen field following completion of an academic education programme in order to use the knowledge learned and put it into practice).

A minimum of a one-year internship is required following successful completion of the academic programme and prior to applying for the final certification required to practice as an APN. During the internship the graduate of the APN programme begins the process to become a clinical care practitioner under the preceptorship of a senior physician building on knowledge gained from the academic programme. The internship is under the supervision of physician
preceptors and includes stipulation of clinical hours, plus completion of case studies and requires recommendations from Director of Nursing and the Head of Clinical Department. The APN Intern receives provisional certification contingent on a pass from the certification review panel. An individual is eligible to apply for registration as an APN after successfully completing the internship and passing the certification process.

**Subtheme: Certification**

Upon successful completion of the internship the APN candidate can apply to the SNB to appear before a certification panel. The certification panel approves/passes or rejects the APN candidate. Required clinical hours are provided that detail criteria for provisional certification & post certification status. If found to be negligent in the role the APN is required to surrender the APN certificate and must do so within 14 days of the cancellation or suspension of certification as an APN.

**Renewal**

Stipulated clinical practice hours are required to renew the APN license. Reference is made to a table of minimal clinical practice required for renewal of the APN license based on Benner’s Stages of Clinical Competence. The table is divided into 4 levels of clinical practice: Year 1 – Internship (supervised practice - Novice/Advanced Beginner – equivalent to 40hr week also defined as 1040 hours (26 weeks); Year 2 (competent) 800 hours (20 weeks); Year 3 (Proficient) – 560 hours (14 weeks); Year 4 (Expert) 320 hours (8 weeks).

**Subtheme: Registry** (compilation & maintenance of a list of names of people who have met specified professional standards)

The SNB maintains the APN Registry of who may or may not be registered as an APN. Additional details associated with the APN Registry define the appeals procedure; regulation of practice & conduct; what the APN register means and how SNB regulates certification. The Registry provides the names of RNs who have the necessary qualifications, competence and experience to practice as APNs.

**Subtheme: Career Structure**

The MOH established a clinical career structure for RNs in 2001 with related remunerations and a promotion track in order to retain nurses in clinical roles. In the clinical career track the APN is placed at Level II with possible progression to Level Three. At Level Three APNs must maintain at least 20% clinical hours of direct patient care to maintain APN certification with the remainder % of hours in nonclinical role components.

**Theme: Nature of Practice**

The nature of practice for APNs was associated with their ability to manage chronic stable conditions, high acuity situations and provide coordination for aging care. At times in the documents this was equated to the role of the junior doctor. The APN was seen as potentially providing a resource for triage nurses, able to provide referrals to specialist doctors, initiate discharge instructions, provide staff and patient education, participate in journal club and provide conference papers. Improved patient outcomes were linked to the ability of APNs to be involved in research projects. APNs were described as full partners in healthcare delivery and in the shaping of healthcare policies.

**Subtheme: Settings and Specialties**

In order to apply for the APN MN programme the nurse must designate a clinical specialty. Fifteen specialties and subspecialties are identified in the documents as likely to be options in Singapore for APN practice. These include: Acute
(Intensive Care Units, Emergency Room) care, medical/surgical (oncology, gerontology, cardiology, neurology) care, community care/primary care (polyclinics), mental health (inpatient and outpatient) and palliative care. APN services were not meant to replace community based services that were already available but the documents did not specifically define what this means.

**Subtheme: Behaviours and Responsibilities**
The ability to work in collaboration & partnership with physicians and other health care professionals is reiterated throughout the review of documents with emphasis on collaborative multidisciplinary management and treatment provided by RNs who now have added responsibilities as an APN. The SNB regulates behaviour through reference to professional conduct & ethics suitable for an APN as described in the regulatory documents.

**Subtheme: Liability/Indemnity**
Liability/Indemnity coverage is provided by an APN’s employer and is also available through the Singapore Nursing Association (SNA). The continuous advancement & expansion of the APN role is seen to correspond with an increase in medical-legal liabilities as APNs assume higher levels of responsibility. Employing institutions include APNs in existing insurance coverage; the APN remains protected by the current legal doctrine of vicarious liability.

**Theme: Key Decision Makers**

**Subtheme: Government**
The amendment to the Nurses & Midwives Act defining regulations for the APN required a pass by the Parliament and President of SG. MOH (April 2005) presented a bill to Parliament to establish a Register for APNs.

*Ministry of Health (MOH)*
Multiple activities and initiatives were linked to the MOH with activities ranging from setting up a Nursing Task Force in 1997 to establishing the President’s Awards to include APNs. The MOH was seen to be working with healthcare institutions, organisations, professional associations, private GPs & other partners. The Committee on Ageing Issues was an example of a specialty committee that functioned under the MOH with a focus on the aging population and supported of APN roles. Representatives of the MOH & NUS collaborated to initiate the master’s programme under the auspices of Yoo Loo Lin School of Medicine, Division of Graduate Medical Studies. The MOH supported the move to university nursing education both in principle and by funding the education fees for each APN student. The directive for a new clinical career structure came from MOH. In addition, the MOH continued to add stimulus for the APN role by mandating a need to recruit more nurses including 200 APNs by 2015. This was associated with advocacy for change and the enhancement of healthcare research & services.

*Chief Nursing Officer (CNO)*
The CNO is the official representation for nursing in the department of the MOH and also functions as Registrar for SNB. Review for legislative requirements falls also under the direction of the CNO e.g. current review for legislative requirements for APN prescribing.

**Subtheme: Agencies specific to nursing**

*Singapore Nursing Board (SNB)*
SNB became a statutory board in 2000 under the Nurses and Midwives Act. It develops & maintains standards for nursing practice that reflect the
minimum requirements necessary to assure that the public is provided
with safe and competent healthcare. As a regulatory board SNB
credentials APN programmes, the individual in the APN role along with
regulation of their practice & continuing education for APN. SNB oversees
the internship process, regulates certification & registration. The SNB
APN Training Committee accredits courses leading to APN certification;
The APN Accreditation Committee oversees the certification of APNs &
matters relating to APN practice.

**Singapore Nursing Association**
SNB is the professional nursing association for nurses in Singapore and
also provides liability insurance for the APN.
SNA & SNB represent the Singaporean nursing community.

**Subtheme: Institutions**

**Education**
The National University of Singapore (NUS), Yoo Loo Lin School of
Medicine (Dean of the Medical School and the Director, Division of
Graduate Medical Studies) initially had authority over the development
and implementation of the APN education programme until its move to
ALCNS (Alice Lee Centre for Nursing Studies) in 2009. The Head of
Department for ALCNS assumed departmental authority but the
programme continued to function under the oversight of the Dean for the
Medical School.

**Employers of APNs**
The employing institution selects all candidates for the APN MN
programme. Key stakeholders in the institutions agree on the candidate,
select a preceptor for the APN Intern and screen documentation when the
APN intern applies for certification. The employers pay a salary to the
fulltime student and the nurse is bonded to return to the sponsoring
institution. Documents suggested that the institution was also expected to
provide a supportive environment for the professional growth of the APN
as well as determining role clarity among APNs, other nurses and other
healthcare professionals. Institutional support was expected to be in the
form of appropriate remuneration and promotion.

**Subtheme: Other Professionals**
Documents indicated that physicians in Singapore have total
responsibility over patient care management. In a CPA (collaborative
practice agreement) between an APN and a physician the physician
delineates what the APN can do as in is “allowed to treat”. The APN
Intern is assigned a preceptor and in his absence another senior
physician takes over the preceptor responsibilities. Physicians and the
Medical School Director (a physician) can reject an application to a
person applying to the APN programme.

**Theme: Support**

**Subtheme: Anticipated**
Documents suggested that as part of the healthcare team APNs required the
support of peers and colleagues plus other healthcare professionals to be
successful. In the beginning of the APN MN programme physician lecturers were
expected to lecture in the proposed programme and thus are viewed as
supportive.

**Subtheme: Actual**
Physicians provided medical direction for the APN as needed, were available by phone or interactive consultation and acted as a collaborative physician to provide backup consultation. Collaborative relationships with health care professionals, esp. physicians, were reported in one survey done on APN Interns. Support from other health professionals is reported in the form of knowledge of the APN role; support from nursing leadership; and understanding of the level of preparation for the APN role. Additionally, the APN programme included physician lecturers based on a history of experience with physicians lecturing in other nursing programmes in Singapore. MOH philosophically is supportive of nursing in Singapore and APNs specifically as manifested in the funding of education tuition fees and passage of regulatory documents. From a funding perspective the employer provides actual support by paying full salary while a student is in the programme. Recognition occurred with a Merit Award for an APN. A badge (gold plated pin, design of honour) to be worn as part of the nursing uniform and S$200 provided visible support to individual APNs.

Theme: Barriers/Obstacles
Subtheme: Anticipated
The review of documents suggested an expected continuing tug-of-war between the medical vs. nursing model and the development of APN roles leading to a “collision course” with physicians. Documents further suggested that confusion & disagreement as to scope of practice for the APN provided barriers to early role implementation and a potential for not only role conflict but underuse & misinterpretation of the APN role. Documents reveal recommended the need to clearly define, integrate & articulate the roles, boundaries and objectives of APN practice to “relevant stakeholders” to avoid conflict.

Subtheme: Actual
The SNB has the authority to approve or reject APN applications, issue practicing certificates, accredit educational courses; accredit teaching institutions offering courses; regulate nursing standards & scope of practice. Documents revealed an emphasis on misconduct including false assumption of titles & fraudulent registration. Data from the documents repeatedly suggested that to deliver a nursing programme in Singapore there are system constraints of 1) university rules and regulations for approval in the context of onsite delivery and quality expected; 2) faculty must meet the parameters of the regulatory authority for programme accreditation. One survey of APN interns found that conflictual working relations with other nurses decreased with time.

Theme: Gatekeeper Effect (A gatekeeper controls access to something – e.g. monitors or oversees actions of others)
Physician preceptor comments, Head of Clinical Departments and Director of Nursing recommendations are required at several levels for the APN candidate to proceed through education and qualification processes. In clinical practice the physician periodically reviews charts managed by the APN. The physician’s decision is final in the event of disagreement over case management. SNB has the authority to approve or reject APN applications, issue practicing certificates, accredit educational courses; accredit teaching institutions offering courses; regulate nursing standards & scope of practice. Documents under the jurisdiction of SNB provided details on misconduct including false assumption of titles, fraudulent registration. Some areas are not specific to APN but to nursing in Singapore.
Institution approval is required all along the way from choosing the master’s candidate to support through the internship to employing the APN.
Theme: Workforce Planning

A national action plan was strategized to maintain a proper understanding of labour statistics including a reexamination of the nursing workforce and how it relates to the healthcare system and a change of the skills in the healthcare workforce. The Minister of Health reiterated three key strategies progressing to jobs requiring higher skills in the public sector: 1) investing in clinical research; 2) integration of services in the long-term sector for patients to move hassle free from one sector to another; 3) added sophistication in line with changing needs, rising costs and rising patient’s expectations – looked to rapidly expand the pool of pharmacists, advanced practice nurses, biostatisticians, bioinformatics experts, healthcare administrators and allied health workers. In this context the APN was viewed as a member of the healthcare team - complementing doctors and taking on duties of junior doctors to free up doctors to manage more complex medical problems.

Workforce planning in Singapore carried with it the expectation of an increased APN presence. The goal was 200 APNs by 2015 to reach 1.4% of nursing population in Singapore with an aim to retain nurses in clinical practice.

Theme: Impact/Outcomes

Subtheme: Anticipated

Data suggests an increase in numbers of expert nurses in all areas of clinical practice in hospital and the community in Singapore intended to improve health care outcomes and to fill in the gaps in healthcare services. The impact of APNS on patient outcomes was demonstrated in many studies done outside Singapore and thus a similar impact on healthcare delivery was anticipated in SG.

Subtheme: Actual

A growth in nursing numbers in general is happening in Singapore including numbers of APNs. Documents suggested that the growth in numbers of APNs will be dependent on the demand for their services. Narrative descriptions indicate that physicians become APN supporters and preceptors when they better understand the role and that patients are satisfied when they understand services provided by the APN.

Theme: Growth/Future Implications

The review of documents revealed that APN roles in Singapore were increasing; innovative roles are developing, APNs were practicing in a wide variety of settings but there continued to be a need to monitor development and outcomes in order to demonstrate effectiveness. The career enhancing settings with increased options and flexibility were appealing to young nurses looking for professional advancement. The trend for more RNs to seek advanced training recognized the nursing potential in Singapore as APNs continued to be viewed as key players in the nation’s healthcare efforts for the future.

Summary

The review of documents suggested that APN development in Singapore was set in motion by individual views and opinions followed by policy rather than an initiative that was driven by policy. No needs assessment or analysis of the healthcare environment supportive of the introduction of APN roles in Singapore was found. Observation of and experiences with the success of NP/APN roles in other countries, especially the United States, appears to have inspired decision makers to imagine that this success could be transferred to Singapore. No evidence was found to suggest a strategic or policy framework is in place for implementation of APN roles. Documents demonstrated a strong vision at multiple levels for the integration of APN roles into the healthcare workforce. There is a view that APNs will contribute to the quality of healthcare services for all Singaporeans but the central visionary subthemes
are the hope for an increase in status for nurses in Singapore and a contribution for professional development. Documents indicate that introduction of a clinical career ladder provided support for the APN initiative. Decisions that led to subsequent changes in regulations and standards supported APN development and the clinical career pathway for nursing.

The amount of support occurring at the highest levels of authority was impressive. The Ministry of Health from a philosophical and funding perspective consistently and generously supported education and implementation of policies supportive of APN roles. The National University of Singapore provided education and expertise accommodating academic rigor for the APN programme. Institutions employing the APN grasped the concept enthusiastically even though documents indicated medical directors and directors of nursing were not clear as to what role the APN should have in their institutions. This support is commendable but contributed to confusion in attempts to reach clarity on the role and the nature of practice. Documents suggested various levels of decision makers embraced a concept that they did not thoroughly understand.

Advanced practice nursing development in Singapore is in its infancy; however, the review of documents revealed there were detailed regulations and standards defining who is an APN (see subsequent section labelled Annex A) along with punitive actions if an individual falsely assumes the title of ‘Advanced Practice Nurse”. The Singapore Nursing Board is the authoritative body that credentials education programmes and the APN. Processes for education, qualifications and maintenance of standards were clearly defined in the documents reviewed.

Descriptive journal articles, narratives and editorials indicated that APNs were expected to provide care in numerous specialties and a variety of settings suggesting that these nurses will be full partners in healthcare delivery in Singapore. This contrasts with documents that indicated that physicians have total responsibility and control over patient care management. Documents revealed a philosophy that the APN will work as part of a collaborative healthcare team to complement the doctor suggesting this as an elevated level of the ‘handmaiden’ role traditionally associated with nursing. Furthermore documents suggested that the overlap between nursing and medical models could lead to conflict and a “collision course” for APN development implying that this could be obstructive rather than facilitative in delivery of healthcare services.

**Bibliography**


Appendix 19
Excerpts from NVIVO9 interview transcripts used for theme & subtheme coding

Reference 1 - 3.18% Coverage
Original Intention for APN role and strongest motivator according to this interview was desire & perceived need for a Clinical Career Structure for nurses in Singapore (see “Quest for Excellence” doc).

BC:
The original intent has been “hijacked to now fill gaps”. It is not clear if there were identified gaps in care for APN to fill but there are not enough MDs in 1) MH 2) Polyclinics 3) chronic diseases. “nurses will do a better job thus fill a gap” “not just to fill shortage”

Reference 2 - 4.16% Coverage
DMS & CNO pivotal to APN development & launching the initiative. Wanted to keep clinical nursing at the bedside.
They went to the minister [Minister of Health] – took 6 months to get the clinical career structure. However, the minister at the time did not see the value of an academic degree for nursing – didn’t believe in academics for nursing thus not interested in high level of the APN. DMS at time [now President of NUS] was instrumental in promoting BScN & MN academic nursing education. He badgered minister until minister gave in on MN but still not for BScN at first. December 2001 minister gave up & said do whatever you like.

Reference 3 - 3.25% Coverage
Now development has a “life of its own” [unanticipated change]. Instead of staying at the bedside they are trying to fill the gaps. Original goal was to have “mature expert clinical nurses” maturity is not there now. Now it is a #s game – that was never the intent. The intent was to grow more & expand the nursing role > career structure. “Didn’t want to lose good clinical nurses” – thought they should move from bedside up to clinical leadership. “vision for clinical nursing & clinical leadership”

Reference 4 - 0.64% Coverage
Concept: expert hand picked nurses would move to new role [after programme]. That was the concept.

Reference 5 - 1.44% Coverage
It was determined that a new role was needed plus an internship esp. with background training based on the feeling that SG nurses not prepared to go straight into role so decided on internship after completion of programme.

Reference 6 - 0.62% Coverage
Common goals – DMS wanted nursing to move forward & wanted the career structure.

Reference 7 - 0.37% Coverage
CNO felt must maintain clinical role & do right by nurses.

Internals\Phase 2 Interviews\CYL\Transcript CYL> - § 5 references coded [14.63% Coverage]
Because at that time I was not in that sort of position where I make decisions so I was manager then from what I see the vision was because we want our staff to be able to teach academically as well as to be clinically competent. So in other words if they go overseas when they come back they can be more up to date & more clinically competent but at the higher level. Because our courses are diploma maybe it’s not the right moment - I don’t know. To me now on reflection it’s a waste of time. We do not have APN here - we didn’t have the APN course here - that was 2001 but our 1st batch was 2003. So that means all the 'things' were not in place so that is why there are 'casualties' of our 1st programme here. No role for them when they go back so step back to the management roles or step back into the education role.

Reference 2 - 4.65% Coverage

OK – at that time its my director of nursing & obviously they are at a higher level; attend SNB meetings & all that it must be revolving around that also I think she is quite a strategist with advanced thinking so there was a vision & discussion of the APN because the primary aim is we must – since it is a teaching institution – our staff actually go out to supervise students so she wants to make sure – yes if you want to supervise students you must be competent – you must be up to date. That is one main reason.

MMS
So do you think she had the vision of the APN in a teaching capacity that they would have had that increased competence?
YL
Because at the time we do send staff overseas for various courses – some of them are in education & you know clinical attachments & things like that. But in [institution name deleted] it is very strong that the staff must go out & supervise students so that is the way they build up their skills you see.

Reference 3 - 1.60% Coverage

As much as I don't like it I believe we are going for APN because of the shortages of doctors. Playing like a bridge – they are doing things that we don’t have enough doctors to do it. Polyclinic is a good example that we do not have enough doctors – if a nurse can do it even if it is a bit cheaper – cost is another factor you see.

Reference 4 - 3.33% Coverage

MMS
Does one have to establish a need? Is wanting an APN good enough?
YL:
Wanting an APN is not good enough because they must know why they want this APN. Not just because I want the APN to do my job so you can free me to do something else. You must have the intention that I want an APN which is going to value add to my job – for example if I am a doctor with stroke patient I don’t have much time but if I have an APN who can bridge can spend some time with the patient but I am trusting her to be able to do the differential diagnosis to be able to report if any changes then I’m OK. But I don’t like the idea of saying yeh you know these are the things I don’t want to do I can farm it out.

Reference 5 - 1.12% Coverage

When you say we need more than that how is that need determined?
YL:
I don’t know how – they have a formula that they use. They must have talked to various people; talk to the medical staff; talk to … maybe it’s because of that.
So when I arrived at NUS I was somewhat surprised that the masters programme (MScNursing) had been implemented through the School of Medicine through the Division of Graduate Medical Study. I found that perplexing because nurses were not in a position to lead their own professional development. But I suppose it did also signal that there was explicit support from the medical fraternity for this role development. Certainly my discussion with professionals within the school of medicine indicated that they did concede the role positively & they did want to support it. Inevitably those doctors (the Singaporean doctors) concerned had lived & worked in another country, particularly the USA & so they had first hand experience of the APN role. And they believed Singaporean nurses could offer so much more in the advanced role.

Reference 2 - 0.49% Coverage
There was explicit encouragement for the nurses to consider the APN role for career progression. However, I am not so clear that there is good knowledge about the programme.

Reference 1 - 1.53% Coverage
My first encounter with APN was in 2003 when I spent a month in UCLA. So when I was in UCLA my interest was actually in liver transplant acute care. So there were two groups of people: you had the residents & you had the APNs. That particular APN was responsible to the attending transplant surgeon. So what happened was that these particular APNs would do the rounds together with the resident. She seems to know what is going on, perhaps because she has been at it much longer than the resident. She goes back to tell the consultant what happened, she writes on the notes, the consultant just listens to what she has to say and just signed it. So then I asked myself can this system be applied in Singapore.

Reference 2 - 1.28% Coverage
So I asked myself – I need stability. I need a group of people who are in the system. So the next thing will be the residents. Can the trainee compensate? So unfortunately in SG once again the trainee (resident) rotates every 6 months – they rotate in different hospitals every 6 months so it means that in May & November it makes it worse. So these guys have some basics of training but they have to get used to the computers, they need to get used to the way we prescribe drugs because every hospital is different. So I thought the APN perhaps would be a good way to tie up all these in betweens.

Reference 3 - 2.24% Coverage
Yes consistency. So the first thought was the consistency to tie over periods where staff change. The second thing – In medicine 80% of the work that we do really is quite routine; probably about 20% needs a little bit of thinking – we have discussion, have to do some internet search do what they say. Repetitive work. I have found out, a lot of research to be sure; doctors do badly at repetitive work. Nursing is much better at doing repetitive work because they are used to following protocol. Doctors are not. So I think part of the problem that we have is with JCI it is repetitive work. You just have to sign your name. If it just tells you to sign your name 20 times you just sign your name. There’s nothing to discuss about evidence based. So that’s why I felt for the healthcare system having APNs is actually added value for the system. 80% of the work which the nurses are much better trained for and allow the doctors to spend their efforts on the 20% of the work which requires a lot of reasoning & perhaps discussions & research.

Reference 4 - 0.59% Coverage
So to summarise so far:
1. The first one was the very fact that we need them to power the gaps.
2. They can do 80% of the work.
3. The third thing actually: when you do repetitive work you start to ask questions. Can I do it better?

Reference 5 - 2.38% Coverage

I see the same problem with the nurses. They get burned out when they do, for example, one year of ICU & nothing else. That is the reason why many of us prefer to maintain our primary specialty - for a change. So because of this system of changing you will find that we need a group of people who are willing to stay continuously in ICU. Who now start to think why are we doing it this way? What can we improve? So these APNs are basically, in my opinion, are hardened veterans of critical care. They have decided it is their job & so they are willing to spend time there. They ask questions, we ask questions and all this. They are actually a very good resource for research. To collect data for example. To streamline the care, for example, for one of the studies I was talking about. So they are day in and day out. Many research, it is not just medical research – so if I talk about research on delirium: delirium is affected by, of course, the patient, by the drug that you give, affected by the care that you give. I can’t standardise the nursing care. So this group of APNs will be a good link for this.
Appendix 20

Example of coding and nodes used in the development of categories and subcategories
## Appendix 21

### Code Jottings for Phase Two – 1st Interview Phase

<table>
<thead>
<tr>
<th>Column 1 Raw Data</th>
<th>Column 2 Preliminary Codes</th>
<th>Column 3 Final Code</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Original Intention for APN role and strongest motivator according to this participant was desire &amp; perceived need for a Clinical Career Structure for nurses in Singapore</strong></td>
<td>Nursing potential Professional advancement Career structure</td>
<td>Professional Development</td>
</tr>
<tr>
<td>Wanted to keep clinical nursing at the bedside but in advanced role</td>
<td>Status quo vs change</td>
<td>Conventional view with change</td>
</tr>
<tr>
<td>went to the minister – took 6 months to get the clinical career structure. minister at the time did not see the value of an academic degree for nursing – didn’t believe in academics for nursing thus not interested in high level of the APN. DMS was instrumental in promoting BScN &amp; MN academic nursing education. He badgered minister until minister gave in on MN but still not for BScN at first. December 2001 minister gave up &amp; said do whatever you like.</td>
<td>value of academic degree for nursing Challenges/overcoming challenges</td>
<td>Pivotal decision makers</td>
</tr>
<tr>
<td>Now development has a “life of its own” Instead of staying at the bedside they are trying to fill the gaps. <strong>Original goal</strong> was to have “mature expert clinical nurses” maturity is not there now. Now it is a #s game – that was never the intent. The <strong>intent</strong> was to grow more &amp; expand the nursing role &gt; career structure. “Didn’t want to lose good clinical nurses” – thought they should move from bedside up to clinical leadership. “vision for clinical nursing &amp; clinical leadership”</td>
<td>Unanticipated change Original goal Intent Clinical leadership</td>
<td>Mindshift Dynamic change Professional development</td>
</tr>
<tr>
<td><strong>Concept:</strong> expert hand picked nurses would move to new role [after programme]. That was the concept</td>
<td>New role Elite nurses concept</td>
<td>Enhanced status</td>
</tr>
<tr>
<td>Common goals – DMS [now Pres. NUS] wanted nursing to move forward &amp; wanted the career structure.</td>
<td>Professional advancement Career structure</td>
<td>Professional development</td>
</tr>
<tr>
<td>must maintain clinical role &amp; do right by nurses.</td>
<td>Maintain Nursing</td>
<td>Enhance status</td>
</tr>
<tr>
<td>It was determined that a new role was needed plus an internship esp. with background training based on the feeling that <strong>SG nurses not prepared to go straight into role</strong> so decided on internship after completion of programme.</td>
<td>New role Insecure with nursing competence</td>
<td>Professional development</td>
</tr>
</tbody>
</table>
more **clinically competent but at the higher level.**

<table>
<thead>
<tr>
<th>Increase competence</th>
<th>Enhance status</th>
</tr>
</thead>
<tbody>
<tr>
<td>the ‘things’ were not in place so that is why there are ‘casualties’ of our 1st programme here. No role for them when they go back so step back to the management roles or step back into the education role.</td>
<td>Casualties/attrition Things not in place</td>
</tr>
<tr>
<td><strong>Playing like a bridge</strong> – they are doing things that we don’t have enough doctors to do it</td>
<td>Mini doctor Bridging the gaps</td>
</tr>
<tr>
<td><strong>Wanting an APN is not good enough</strong> because they must know why they want this APN. Not just because I want the APN to do my job so you can free me to do something else. You must have the intention that I want an APN which is going to value add to my job – for example if I am a doctor with stroke patient I don’t have much time but if I have an APN who can bridge can spend some time with the patient but I am trusting her to be able to do the differential diagnosis to be able to report if any changes then I’m OK. But I don’t like the idea of saying yeh you know these are the things I don’t want to do I can farm it out.</td>
<td>Identify purpose/intent Add value Mini doc Bridging the gaps Adding value and enhancing quality of care</td>
</tr>
<tr>
<td>When you say we need more how is that need determined? I don’t know how – they have a formula that they use. They must have talked to various people; talk to the medical staff; talk to … maybe it’s because of that.</td>
<td>Assumption of knowledge Personification of the collective ‘they’ Assumed authority</td>
</tr>
<tr>
<td>So then I asked myself can this system be applied in Singapore.</td>
<td>Adapting role Implied need</td>
</tr>
<tr>
<td>I was somewhat surprised that the masters programme had been implemented through the School of Medicine through the Division of Graduate Medical Study. I found that perplexing because nurses were not in a position to lead their own professional development. But I suppose it did also signal that there was explicit support from the medical fraternity for this role development. Certainly my discussion with professionals within the school of medicine indicated that they did concede the role positively &amp; they did want to support it. Inevitably those doctors (the Singaporean doctors) concerned had lived &amp; worked in another country, particularly the USA &amp; so they had first hand experience of the APN role. And they believed Singaporean nurses could offer so much more in the advanced role.</td>
<td>Lack of nursing voice Physician buy in Nursing potential</td>
</tr>
</tbody>
</table>
There was explicit encouragement for the nurses to consider the APN role for career progression. However, I am not so clear that there is good knowledge about the programme.

<table>
<thead>
<tr>
<th>Lack of role clarity</th>
<th>Role ambiguity</th>
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<tr>
<td>Professional advancement</td>
<td></td>
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</table>

So I asked myself – I need stability. So I thought the APN perhaps would be a good way to tie up all these in betweens.

<table>
<thead>
<tr>
<th>Bridging the gaps</th>
<th>Implied Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power the gaps</td>
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</table>

So the first thought was the consistency to tie over periods where staff change. So that’s why I felt for the healthcare system having APNs is actually added value for the system.

<table>
<thead>
<tr>
<th>Consistency</th>
<th>Value add</th>
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<tbody>
<tr>
<td>Value add</td>
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</tbody>
</table>

The third thing actually: when you do repetitive work you start to ask questions. Can I do it better? So this group of APNs will be a good link for this.

<table>
<thead>
<tr>
<th>Link</th>
<th>Filling the gaps for care continuity</th>
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</thead>
<tbody>
<tr>
<td>Bridging the gaps</td>
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</table>

It is going to be a dynamic change in SG but is it going to **enhance nursing** in general? yeh yeh yeh. It’s a career track

<table>
<thead>
<tr>
<th>Career track</th>
<th>Enhance nursing status &amp; professional development</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professional advance</td>
<td></td>
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</table>

so that’s a huge value added where I see a well trained, motivated advanced practice nurse can add so much value just because there are so many things that need to be done and the medical profession in SG cannot cope with the need & spectrum of care that we need to provide.

<table>
<thead>
<tr>
<th>Value add</th>
<th>Added value for quality of care</th>
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</thead>
</table>

it is a need. Especially because our population is aging with chronic disease. At the polyclinic the chronic diseases are seen by the APNs, you don’t need a doctor. It’s also good for the profession. Look around the world there are APNs – we don’t have; look around the world there are degree nurses – we don’t have. This is an improvement for the profession & I am glad. It is a proud moment to see our degree and masters prepared nurses graduating

<table>
<thead>
<tr>
<th>Clinical Need</th>
<th>Implied need</th>
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<tbody>
<tr>
<td>Professional Advance</td>
<td>Professional development</td>
</tr>
</tbody>
</table>

really "want to provide a world class healthcare system" We see a need to position ourselves " to be a vital player in helping to transform SG as a world class healthcare centre

<table>
<thead>
<tr>
<th>Value add</th>
<th>Add value for quality of care</th>
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</thead>
<tbody>
<tr>
<td>System</td>
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</table>

Professionally "I think nursing has always been struggling to achieve greater recognition".

<table>
<thead>
<tr>
<th>Status</th>
<th>Enhance nursing status</th>
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</thead>
<tbody>
<tr>
<td>Professional advance</td>
<td></td>
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</tbody>
</table>

We must “create public trust” because nurses by being in the frontline taking care of patients around the clock we are really at the point of care where we can really make a change and a difference.

<table>
<thead>
<tr>
<th>Add value</th>
<th>Add value to care quality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Change</td>
<td>Dynamic change and mindshift</td>
</tr>
</tbody>
</table>

Nurses “aspire to change”. They inherently aspire

| Change | |
|--------|
to make a difference in the way they deliver care but unfortunately “a lot of them I guess are actually helpless partly because systems constrain them and secondly the educational preparation has not been adequate

Policymakers have actually put in the structures & support at the highest level, that is the ministry level, for this change to come – I am saying this in the context of the APN. If APN strategy doesn’t develop we will always limit the potential for nurses in areas where they can excel.

The timing must be right. the so called messaging from the policy makers. With the timing right we think it is an opportunity for us to make a breakthrough for nursing – if we don’t do it now, once the opportunity goes we have lost our chance altogether.

now the nurses if they are well trained should take on this role & intervene at the time of need & save the patient a lot of money.

It’s a collective voice of nursing. It has always been our desire to see nursing take on a more active role & be an active decision maker in some of the policies. Ministry wants nursing to be there. It’s for us to make it happen. That means you do not have to ask for permission for anything. Just tell them what you think your vision for nursing is & what do you think are the resources & capabilities you need to make that happen & then you just put that forward & that’s it. They will support whatever it takes as long it is in the interest of advancing health care & done in the most cost effective manner.

them a dream; telling them a dream & get them to dream & vision to work together for a new nursing workforce & a “new nursing culture”. When I am invited to every platform

It is going to have a major impact on the nursing culture if you ask me. I think there will be a more informed nursing workforce that will definitely change the status quo. It is going to have a major impact on the nursing culture if you ask me. I think there will be a more informed nursing workforce that will definitely change the status quo.

We will definitely “disrupt healthcare in a positive way”. I’m talking about a positive disruption of healthcare. We’ve got to make healthcare faster, cheaper & better. Not conventional – grateful for the help on the journey of change.

Partly it is because they are short of the medical

| to make a difference in the way they deliver care but unfortunately “a lot of them I guess are actually helpless partly because systems constrain them and secondly the educational preparation has not been adequate | Aspirations blocked | Professional Development |
| Policymakers have actually put in the structures & support at the highest level, that is the ministry level, for this change to come – I am saying this in the context of the APN. If APN strategy doesn’t develop we will always limit the potential for nurses in areas where they can excel. | Policy structure Opportunity Nursing potential | Key policymakers Professional Development |
| The timing must be right. the so called messaging from the policy makers. With the timing right we think it is an opportunity for us to make a breakthrough for nursing – if we don’t do it now, once the opportunity goes we have lost our chance altogether. | Timing Opportunity | Change Timing |
| now the nurses if they are well trained should take on this role & intervene at the time of need & save the patient a lot of money. | Assumed benefit | Filling the gaps |
| It’s a collective voice of nursing. It has always been our desire to see nursing take on a more active role & be an active decision maker in some of the policies. Ministry wants nursing to be there. It’s for us to make it happen. That means you do not have to ask for permission for anything. Just tell them what you think your vision for nursing is & what do you think are the resources & capabilities you need to make that happen & then you just put that forward & that’s it. They will support whatever it takes as long it is in the interest of advancing health care & done in the most cost effective manner. | Vision for nursing Collective voice Support | Professional development Pivotal stakeholders |
| them a dream; telling them a dream & get them to dream & vision to work together for a new nursing workforce & a “new nursing culture”. When I am invited to every platform | New nursing culture Dream Vision/voice | Vision Professional Development |
| It is going to have a major impact on the nursing culture if you ask me. I think there will be a more informed nursing workforce that will definitely change the status quo. It is going to have a major impact on the nursing culture if you ask me. I think there will be a more informed nursing workforce that will definitely change the status quo. | Nursing culture Voice Change Status quo gone | Change Professional Development |
| We will definitely “disrupt healthcare in a positive way”. I’m talking about a positive disruption of healthcare. We’ve got to make healthcare faster, cheaper & better. Not conventional – grateful for the help on the journey of change. | Change Journey | Change Value add – cost savings |
| Partly it is because they are short of the medical | Bridge the gaps | Mini doc |
doctor so they have to increase the people who can provide sufficient & quality care to the patient; the other part is they would like to upgrade the nurse roles so the nurse can provide quality care

<table>
<thead>
<tr>
<th>Upgrade nursing</th>
<th>Professional development</th>
</tr>
</thead>
</table>

I think that as nursing progress every nursing leader wants to aspire & move on to something that is better. It is actually nursing driven but you do have to find a doctor’s champion. Nursing driven means the nursing career track? Yes

<table>
<thead>
<tr>
<th>Professional advance</th>
<th>Professional development</th>
</tr>
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<tbody>
<tr>
<td>Career track</td>
<td>Physician gatekeeper</td>
</tr>
</tbody>
</table>

For quite a long time there had been a drive particularly amongst the nurses in a sense to enhance the professionalization of nursing in Singapore. we were not realising the full value potential of the nursing community.

<table>
<thead>
<tr>
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<th>Professional development</th>
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<tbody>
<tr>
<td>Opportunity</td>
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</table>

Because, frankly, a lot of these things are outside of the control of the nursing leadership. They are CEO level decisions but I think the CEOs are very supportive & understanding & they were able to work with the nursing leadership. Because I think the nurses, my sense is that they were thrilled that they were now being recognised & now concrete steps were being taken to enhance professionalism of the nursing group. So that there was a strong alignment of interest at the highest level.

<table>
<thead>
<tr>
<th>Status</th>
<th>Enhance nursing status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professional advancement</td>
<td>Pivotal stakeholders</td>
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Appendix 22
Singapore Ministry of Health Organisational Chart
Chart removed
(Permission not obtained to use)
Appendix 23
Organisational Chart – Singapore Office of the Director of Medical Services

Chart removed
(permission not obtained to use)