The need for improved educational development of nurses and midwives to strengthen quality of care in PNG

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An integrated approach

Summary:

- Governance: NDOH, CNMO, national Standards
- Education: high quality accredited educational institutes and programs
- Associations: support health professionals, provide CPD
- Regulation: mandated by legalisation to protect the public, provide competent practitioners, standards and registration

Reference:
Importance of nurses and midwives

• For every 1,000 births as many as 9 mothers and 24 babies die, WHO and PNG Health Minister 2019 meeting estimates 6,000 more skilled birth attendants needed to meet the global standard.

• WHO states you need 1 midwife for every 175 births

A healthy workforce starts with education UHC 2030

• Trained health workforce based on quality and competence, with a special focus on nurses, midwives and community health workers.
Health workforce per 1000

Maternal and Child Health Initiative

NDOH Taskforce 2009 - Maternal and Child Health Initiate (MCHI) was establish and carried out 2011-2015. Following NDOH MCH
The main aim of the MCHI was to contribute to a decrease in maternal mortality rate in PNG in a sustainable manner through improved quality of essential maternal and newborn health care.

The objectives of the Initiative were:

- To improve the standard of midwifery clinical teaching and practice in the five teaching sites,
- To improve the quality of obstetrical care in two regions through the provision of clinical mentoring, supervision and teaching.

This initiative was a truly integrated approach
Improving PNG Maternal and Child Health Education – 10 years

2009

- Small project started due to funding constraints
- Funding Negotiations
- Government task force
  - NDOH Maternal and Child Health Task Force
  - Settings road map with many stakeholders
- Monitoring and evaluation, research, capacity building and stakeholder communication

2010

- Maternal Child Health Initiative
  - WHO & AusAID WHO CC UTS
  - 8 Midwifery Educators 2 O & G
- Australian Awards have provided CHW, nursing and midwifery Scholarships assisting Institutes and increase workforce number

2012

- Reproductive Health Training Unit (PPP) Established

2014

- M & E clearly showed need for review and upgrade of midwifery curriculum from 12-18 months
- Curriculum
  - Approved by NDOH and Regulation Committees
  - Trained 1,600 practitioners across PNG EOC· EMOC
- Program Ends

2016

- Ongoing review for maternal health highlight many challenges
- Curriculum
  - Approved by NDOH and Regulation Committees
- Increase from 4-5 Schools of Midwifery tool of 15 Midwifery educators in country
- Accreditations

2017

- Curriculum now approved skills log book, competencies stakeholder revision

2018

- Government
  - WHO task force
  - Highlights Maternal and Child Health workforce shortfall by up to 6,000
- Curriculum

2019

- Urgent - CHW and Nursing Curriculum review and revised MCH programs
- Monitoring and evaluation, research, capacity building and stakeholder communication

Michele Rumsey Director WHO Collaborating Center University of Technology Sydney
Partnerships:
Why invest?

A call for investing in nurses, midwives and community workers

- 90% are women.
- Nurses and midwives are more than 50% of health workforce globally.
- In our PNG, CHWs is over 71% of health workforce.
- They provide accessible safe and cost-effective care, based on community needs.

Recent evidence

- Findings **Triple Impact Study** showed that investing in nursing will meet 3 SDG goals – *improve health, promote gender equality and support economic growth*.
- UHC would not be achieved without *strengthening nursing and midwifery, and developing nursing leadership and policy roles*.
- Findings of study were also inline with the recent work of the **WHO High-Level Commission on Health Employment and Economic Growth**, which has demonstrated the links between investments in the health workforce and economic growth.
If we don’t invest

• Care of whole community is affected
  • Less jobs for women
  • Immunisation rates are reduced
  • Infection control is reduced
  • Screening of patients becomes rushed
  • Observations and results get missed
  • Referral decisions are slower
  • Wounds become infected leading to loss of limbs
  • Important data is not collected (STEP/PEN, HIS…)
  • Mothers die and survival of their children is at greater risk

• Impact on the community
• Impact on the economy
WHO Faculty Development Study

- UTS Team: Professor John Daly, Professor Patricia Davidson, Professor Debra Jackson, Jan Sayers (UWS), Prof Lin Lock, Michele Rumsey, Jodi Thiessen, Kathleen Fritsch (WHO)

- Focus group discussions with participants from: Papua New Guinea, Laos, Cambodia, China, Samoa, Philippines.

- Conducted 78 surveys in total (45 in PNG from 8 Schools, 33 from seven South Pacific countries.

Diagnostic Audits of SON and CHW institutes in PNG

- Two DFAT audits were conducted in PNG in 2013 to review infrastructure and teaching capacity of nursing and community health worker educational institutes – over 900 stakeholders were interviewed.

- Schools of Nursing audit – a team travelled to all SON

- Community Health Worker Training Institutes – team travelled to all CHW institutes
Curriculum review

Issues

- Both nursing and CHW Diagnostic Audits (2013) stated that improvements in the Quality Frameworks of the institutes were needed as the curriculum is fundamental to quality improvement – **met over 900 stakeholders.**
- The current nursing curriculum was ratified in 2002 (**almost 20 years old**).
- The current community health workers’ curriculum was developed from 2000 and finally implemented 2008 (**16 years old**).

Findings

- Competences well understood in Schools but **NOT** by clinical staff especially in rural remote areas. Accreditation process in place but, Nursing Council under resourced and requires urgent review of HR structures
- Only **51% of all educators have teaching qualification and majority have only been in teaching for only 1-5 years**
- **Quality Management Systems need improvement**
- Very limited professional development for educators – moral very low
- Curriculum reviews and faculty and educator support urgently required
Need to improve quality

PNG Nursing Council accreditation data 2017 on 9 approved institutes:

- Some institutes accredited for 1st time in 30 years
- Only 75% educational institutes met NDOH staff ceiling;
- shortfall of around 38 educators
- 28% of educators have a master’s qualification;
- Only 60% have any educational qualification;
- 3 of the Principals do not hold higher education qualifications;
- student attrition rate very high in some institutes;
- facilities reviewed against case mix, national standards – need strengthening;
- urgent need for curriculum review and improved quality improvement processes.
Curriculum review

Priority actions

• **Curriculum development** for country context eg. majority of health care workers are in rural and remote areas, not hospitals

• **Strengthen** health care regulation that is appropriate to primary health care needs

• **Increase Preceptorship training** for clinical facilitators to ensure student clinical practice assessments are in line with national competencies and curriculum

• **Government and employer ratification** that CPD is required and sponsored to enable **pathway for health professionals** to become educators.

• Renew regulation legalisation and recurring license renewal tied to CPD

• Explore issues such as: workforce, scope of practice, specialisation, competency, language and skill mix, arising from overseas trained health care workers.
Improvements in education

Evidence

- old curriculums, reviews being carried out in isolation
- coordination of specialisation programs
- need for highly qualified educators
- need for continuing professional development
- lack of regular institutional accreditation
- need to strengthen regulation and standards
- lack of evidence of conducting and using research
- opportunities to build local evidence

WHO CC UTS, WHO Fiji (2017) Pacific Online Learning Net Review
South Pacific Chief Nursing Midwifery Officer Alliance (2016) WHO CC UTS Meeting Brief
WHO CC UTS & DFAT (2012-2013) Schools of Nursing Audit
WHO CC UTS & DFAT (2012-2013) Community Health Worker Training Institutes audit
DFAT (2016) Reproductive Health Training Unit M and E
WHO CC UTS & WHO (2012-2013) Faculty Development Needs Assessment survey
JCU/AUT Pacific Project 2012. Enhancing the Quality of Nursing and Midwifery Educational Programs and Services in the Pacific. Report for Part B.
Workforce pipeline & pathways

Program to fill gap: diploma to degree fast track

Regional specialist critical plan -

Mental health, child health, acute care 1 year post reg

Midwifery 2-5 post reg 1 year - 18 months Dip/Degree

Advanced Practitioner 1 year

Ongoing succession planning for educators

Improved patient outcomes

Scope of Practice

Curriculum review career pathway nurse aide, registered nurse to degree

Short annual faculty development program to incorporate curriculum in subject plans, teaching skills, student assessments, quality improvements

Health workforce quality crisis - nurses and midwives are 78% of Pacific workforce

Strengthen regulation, Act’s - competence’s, standards, clinical assessors, quality improvement processes, accreditation

Linked to International Standards and Quality Frameworks

Curriculum review career pathway nurse aide, registered nurse to degree

Few weeks - 9 months - 2 year

3 years

1-6 years

Nurse aide /CHW Registered nurse Cert/Dip Degree Masters Educators

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Historical Challenges

There are some challenges in improving quality of care for women:

• In 2012, 157 nurses graduated in PNG, following World Bank Workforce Crisis Report 2011 and DFAT diagnostic audits\textsuperscript{7,8,9}, NDOH Workforce Plan.

• **NDOH 2009 Maternal Health Taskforce** - World Bank report estimated that there were 293 midwives in PNG in 2009 registered as specialist nurses, with 42% retiring in 5 years.

• Lack of any reliable data registration or workforce.
PNG NC Board & NDOH Staff
Positive impacts

- **Strengthening of regulation processes**
- Increased number of midwives from 293 to 780 (2009-2018)
- Midwives registered for first time in 2014
- Supported Midwifery Schools increasing from 4 to 5 others in pipeline\(^{11,18}\)
- PNG Nursing Council audit review indicating nursing student enrollments exceeded **projections from** 157 to 505 (2012-2017)
- Accreditation of new and existing nursing institutes were carried out by PNG Nursing Council over the last 5 year
- An increase from 8-13 nursing institutes, with a further 5 in the pipeline yet to be accredited.
- 18 month Midwifery Curriculum approved in 2017, running in 3 of 5 institutes, last two to start in 2020.
- **Review of midwifery competences and midwifery skills log book**
- PNG NC Roadshows to all **Provinces** to discuss regulation, competences, ethical practice
- Building a body of Evidence and Research
Current Nursing Council Roadshows

Mt Hagen, Western Province, Angau Hospital Lae, Daru Funded by WHO
### NEWLY REGISTERED NURSE GRADUATES (PROVISIONAL)

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<td>113</td>
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<td>OVERSEAS</td>
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- In 2012, 157 nurses graduated in PNG, following World Bank Workforce Crisis Report and DFAT diagnostic audits\(^7\,8\,9\), NDOH Workforce Enhancement Plan
- 7 - 13 nursing institutes
- 4 - 5 midwifery programs
Improved registration processes

- All documents and annual reports on Website PNG NC Regulation on www.health.gov.pg
- Processes, accreditation, communication strategy, policies, standards, documentation archiving and committee structures:
  - **Time to bring stakeholders** and registrants along with changes roadshows;
  - Archiving and scanning 50 years of documentation;
  - Graduates get **provisional registration** after 6 months go through competency-based approval by clinicians (preceptors) to become fully registered;
  - Review 10 year period 2004–2014, only 44% conversion to full registration, 2014–15 up to 69%, and 2016 73%;
  - Licensing every other year and increase in fees;
  - License renewal - 3,758 in 2012, doubled to **6,271** 2015, back to 5,000
  - Increase in fees from 2PGK 10,000 – to over 300,000 PGK.
Without updated curriculums, we have an increase in the quantity of health workers with no improvements in quality.

Without quality education patient care will not improve.
Specialist vs Generalist

- Sustain public **financing and harmonise health investments**.
- Explore how **digital technological, financial and social innovations** can help to address challenges to deliver quality of health services.
- Foster strong alignment among global health actors and development partners to support progress, including coordination of financing mechanisms.

**Professional development framework**

- EdCaN framework example for framing how nurses can think about embedding specialist skills into generalist roles.

Nurse practitioners

Review Nurse Practitioners (MA) for the Pacific design review needed primary health approach, including - prevention, health education, managing advanced level care - decision making, referrals , working in collaboration with medical practitioners. International standard masters program – regional research.

Research shows¹ impact of nurses and midwives advanced practice:

- Increase
  - Continuity of care
  - Prompt referrals to specialists
  - Patient and care satisfaction
  - Effective clinical leadership
  - Motivation of other health professionals
  - Increase in professional development

- Decrease
  - Administration and re-admission rates
  - Workload of medical practitioners
  - Waiting times
  - Costs due to early intervention
  - Non-compliance with treatment
  - In too many medications for patients

¹ WHO EURO (2017) Good Practice Brief
State of World Nursing Report

State of the World’s Nursing report and State of the World’s Midwifery report will

• Inform national policy on strengthening nursing and midwifery and accelerating process across the SDGs
• Provide evidence that can help drive the development of national workforces and unlock investment in nursing and midwifery

WHO International year of nurse and midwife 2020

• WHO request - Government Chief Nursing and Midwifery Officers will identify data on nursing practices, education, regulation, and working conditions.
• WHO will convene the Government Chief Nursing and Midwifery Officers Forum to May 2020 73rd WHA discuss the report and implications
Summary:

- Shortage of educators
- Shortage of midwives
- Political influence to have a School of Nursing in each province
- **Need to improve quality of nursing graduates**
- No clear Scope of Practice nurse aide, CHW, nurse, midwives all way to educator
- Strengthen research and evidence skills
- Lack of specialist nurses and CPD opportunities
- More work on **knowledge, skill and attitude** of nurses and midwives
- Lack of leadership opportunities and training
- **Lack of leadership in government and NDOH – CNMO**
- Legislation 1980s – urgent need to reform - Health Practitioners Bill
- **Stand alone Health Practitioners Registration system**
Building a healthier world together

- The education and development of nurses, midwives and community workers are essential for improved quality of health care services and to meet UHC.

- New programs and institutes resulted in an increased in quantity but not quality of nursing graduates.

- Old curriculums and educational approaches need to be updated to improve quality.

- Urgent need for fast track educators and faculty development program.
To see the many other projects go to our UTS WHO CC website:

WHO CC Global Network for Nursing and Midwifery:
http://www.globalnetworkwho.cc

South Pacific Chief Nursing and Midwifery Officers
www.spcnmoa.com

Twitter
@whoccmichele
@UTS_Health

Email
whocc@uts.edu.au
Appendix

WHO Faculty Development Study results

A.1 Enrolment, graduates and attrition (PNG SON 2012-13)
Appendix

WHO Faculty Development Study results

A.2 Age of Teaching Staff

- Age of teaching staff across all nursing schools in PNG
- The graph shows the distribution of age groups for teaching staff.
- The age groups are divided as follows:
  - 21-25: 5.3% (2)
  - 26-30: 5.3% (2)
  - 31-35: 18.4% (7)
  - 36-40: 21.1% (8)
  - 41-45: 26.3% (10)
  - 46-50: 5.3% (2)
  - 51-55: 13.2% (5)
  - 56-60: 5.3% (2)
  - 61-65: 2.6% (1)
  - 65 or over: 2.6% (1)
Appendix

WHO Faculty Development Study results

A.3 Time in current position

Time spent in current position of all staff in nursing schools in PNG

- Less than 1 year: 18.4% (7)
- 1-5 years: 47.4% (18)
- 6-10 years: 10.5% (4)
- 11-15 years: 2.5% (1)
- 16-20 years: 10.5% (4)
- More than 20 years: 10.5% (4)
Appendix

WHO Faculty Development Study results

A.4 Highest level of qualification

[Bar chart showing the highest level of qualification completed by staff in PNG. The chart indicates that Bachelor's Degree is the highest level of qualification with 44.7% (17), followed by Masters at 31.6% (12), Diploma at 18.4% (7), Certificate at 2.6% (1), Doctorate at 2.6% (1), and Other, please specify.]
WHO Faculty Development Study results

A.5 Post-registration qualifications

Areas of post registration qualifications

- Critical care / emergency: 2.9% (1)
- Surgical nursing: 2.9% (1)
- Aged care: 2.9% (1)
- Child and family health: 32.4% (11)
- Research: 2.9% (1)
- Mixed medical / surgical: 2.9% (1)
- Perioperative: 2.9% (1)
- Rehabilitation / disability: 2.9% (1)
- Community health: 2.9% (1)
- Medical nursing: 2.9% (1)
- Midwifery: 38.2% (13)
- Mental health: 2.9% (1)
- Education: 44.1% (15)
- Other, please specify: 41.2% (14)
WHO Faculty Development Study results

A.6 Research

Research and Scholarship: how staff consider their

- use evidence from recent literature to improve nursing and/or midwifery
- develop proposals for curriculum development, policy and/or research
- initiate original research projects
- share your own research results through peer reviewed journals, publications

Graph showing the percentage of staff who engage in each of these activities, with categories ranging from "Never" to "Always".
## Appendix

### A.7 List of existing Schools of Nursing in PNG

<table>
<thead>
<tr>
<th>No</th>
<th>Name of Institute &amp; Course/s offered</th>
<th>Institution location</th>
<th>Accredited</th>
<th>Indicate with Yes or No</th>
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<tbody>
<tr>
<td>1</td>
<td>Pacific Adventist University – Bachelor in Nursing and midwifery</td>
<td>Outskirts of NCD- 17 Mile</td>
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<td>2</td>
<td>Lae School of Nursing – Diploma general nursing</td>
<td>Morobe, Province</td>
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<td>3</td>
<td>Highlands Regional College of Nursing - Diploma general nursing</td>
<td>EHP</td>
<td>Yes</td>
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<td>4</td>
<td>Mendi School of Nursing - Diploma general nursing</td>
<td>SHP</td>
<td>Yes – requires urgent practical room and administration governance issues</td>
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<td>5</td>
<td>Enga College of Nursing - Diploma general nursing</td>
<td>EP</td>
<td>Yes</td>
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<tr>
<td>6</td>
<td>DWU- St Mary’s School of Nursing - Diploma general nursing &amp; midwifery</td>
<td>ENBP</td>
<td>Yes</td>
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<td>7</td>
<td>Lutheran School of Nursing - Diploma general nursing &amp; midwifery</td>
<td>Madang</td>
<td>Yes</td>
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<td>8</td>
<td>St Barnabas School of Nursing - Diploma general nursing</td>
<td>Milne Bay</td>
<td>Yes – but has high enrolment of students. This needs to be addressed</td>
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<td>9</td>
<td>Nazarene College of Nursing - Diploma general nursing</td>
<td>Jiwaka Province</td>
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## A.8 List of newly opened Schools of Nursing offering a diploma in general nursing in PNG

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<th>Name of Institute/ Course/s offered</th>
<th>Institution location</th>
<th>Accredited</th>
<th>Indicate with Yes or No</th>
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<td>Asia Pacific Institute of Applied Social, Economic, and Technical Studies (APIASETS) Private run-training program</td>
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<td>- work in progress to address recommendations per audit report</td>
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<td>Boram School of Nursing</td>
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<td>- New intake commenced in 2019</td>
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<td>DWU- St Benedicts School of Nursing</td>
<td>ESP</td>
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</table>
### A.9 Registrants

**Professional Categories of Renewal Registrants 2014-2015**

<table>
<thead>
<tr>
<th>NO</th>
<th>CATEGORY</th>
<th>NUMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Nurse Aides/ Enrolled Nurses/MCH</td>
<td>1427</td>
</tr>
<tr>
<td>2</td>
<td>Registered Nurses</td>
<td>4078</td>
</tr>
<tr>
<td>3</td>
<td>Midwives</td>
<td>207</td>
</tr>
<tr>
<td>4</td>
<td>Specialists (Mental Health, Acute Care, Paediatric, Critical Care, Eyes)</td>
<td>477</td>
</tr>
<tr>
<td>5</td>
<td>Unknown Professional Category</td>
<td>82</td>
</tr>
<tr>
<td></td>
<td><strong>Grand Total</strong></td>
<td><strong>6271</strong></td>
</tr>
</tbody>
</table>

Of the 6,271 registrants who renewed registration (and therefore are active and working legally) in the 2014–2015 period, it is estimated that 1,427 are nursing aides.
Appendix

A.10 Overseas Registrants
Increase in Overseas Registrants

<table>
<thead>
<tr>
<th></th>
<th></th>
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<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>All Overseas Registrants</td>
<td>51</td>
<td>113</td>
<td>111</td>
<td>113</td>
<td>27</td>
<td>29</td>
<td>13</td>
<td>15</td>
<td>472</td>
</tr>
</tbody>
</table>

- Working with stakeholders, MSF, Red Cross, VSO, missions, Mercy Boats, Department of Immigration Health Secretary.

- Nursing Council recognises nurses registered in other countries such as Australia, New Zealand, Philippines, Fiji and other South Pacific Islands, but has no agreement with any of these countries.

- All applicants from overseas requiring registration must submit required documentation to the Nursing Council.
Appendix

A.11 OVERSEAS REGISTRANTS

<table>
<thead>
<tr>
<th></th>
<th></th>
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<th></th>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>All OVERSEAS</td>
<td>51</td>
<td>113</td>
<td>111</td>
<td>113</td>
<td>27</td>
<td>29</td>
<td>13</td>
<td>15</td>
<td>472</td>
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<tr>
<td>REGISTRANTS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Nursing Council recognises nurses registered in other countries such as Australia, New Zealand, Philippines, Fiji and other South Pacific Islands but has no agreement with any of these countries. All applicants from overseas requiring registration must submit required documentation to the Nursing Council.
## Appendix

### A.12 2018 Full Registration – Against Provisional Full Registration Sept – Red Provisional Per School

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>St. Barnabas School of Nursing</td>
<td>ALOTAU</td>
<td>5</td>
<td>21</td>
<td>5</td>
<td>27</td>
<td>12</td>
<td>18</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>88</td>
</tr>
<tr>
<td>2</td>
<td>St. Mary’s School of Nursing, Vunapope</td>
<td>KOKOPO (RABAUL)</td>
<td>26</td>
<td>23</td>
<td>28</td>
<td>27</td>
<td>3</td>
<td>24</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>132</td>
</tr>
<tr>
<td>3</td>
<td>Lutheran School of Nursing, DWU</td>
<td>MADANG</td>
<td>7</td>
<td>43</td>
<td>29</td>
<td>43</td>
<td>15</td>
<td>35</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>172</td>
</tr>
<tr>
<td>4</td>
<td>Lae School of Nursing, Unitech Lae</td>
<td></td>
<td>3</td>
<td>15</td>
<td>60</td>
<td>35</td>
<td>6</td>
<td>14</td>
<td>0</td>
<td>1</td>
<td>3</td>
<td>137</td>
</tr>
<tr>
<td>5</td>
<td>Nazarene College of Nursing, Kunjip</td>
<td>MT HAGEN</td>
<td>15</td>
<td>15</td>
<td>28</td>
<td>22</td>
<td>5</td>
<td>42</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>129</td>
</tr>
<tr>
<td>6</td>
<td>Mendi School of Nursing</td>
<td>MENDI</td>
<td>6</td>
<td>29</td>
<td>57</td>
<td>30</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>122</td>
</tr>
<tr>
<td>7</td>
<td>Highlands Regional College of Nursing</td>
<td>GOROKA</td>
<td>12</td>
<td>24</td>
<td>29</td>
<td>44</td>
<td>10</td>
<td>5</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>124</td>
</tr>
<tr>
<td>8</td>
<td>Pacific Adventist University</td>
<td>PORT MORESBY</td>
<td>7</td>
<td>19</td>
<td>27</td>
<td>57</td>
<td>1</td>
<td>40</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>153</td>
</tr>
<tr>
<td>9</td>
<td>University of Goroka</td>
<td>GOROKA</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>81</td>
<td>189</td>
<td>263</td>
<td>285</td>
<td>52</td>
<td>178</td>
<td>0</td>
<td>3</td>
<td>6</td>
<td>1057</td>
</tr>
<tr>
<td>10</td>
<td>Overseas</td>
<td>OVERSEAS (All Countries)</td>
<td>30</td>
<td>21</td>
<td>44</td>
<td>26</td>
<td>53</td>
<td>28</td>
<td>8</td>
<td>0</td>
<td>6</td>
<td>216</td>
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</tbody>
</table>

Provisional to Full success %

<table>
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<tr>
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<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Provisional to Full</td>
<td>50%</td>
<td>43%</td>
<td>50%</td>
<td>77%</td>
<td>19%</td>
<td>178</td>
<td>157</td>
<td>225</td>
<td>213</td>
<td>1270</td>
</tr>
<tr>
<td>success %</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## A.13 Midwives
### Newly Registered Midwifery Graduates (Full)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>St. Mary's School of Nursing &amp; Midwifery</td>
<td>Vunapo</td>
<td>17</td>
<td>20</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>20</td>
</tr>
<tr>
<td>UPNG School of Medicine &amp; Health Science</td>
<td>Port Moresby</td>
<td>1</td>
<td>2</td>
<td>18</td>
<td>69</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>90</td>
</tr>
<tr>
<td>Lutheran School of Nursing, DWU</td>
<td>Madang</td>
<td>10</td>
<td>10</td>
<td>21</td>
<td>19</td>
<td>74</td>
<td>0</td>
<td>0</td>
<td>102</td>
<td>0</td>
<td>226</td>
</tr>
<tr>
<td>Pacific Adventist University</td>
<td>Port Moresby</td>
<td>12</td>
<td>22</td>
<td>17</td>
<td>78</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>131</td>
</tr>
<tr>
<td>University of Goroka</td>
<td>Goroka</td>
<td>1</td>
<td>11</td>
<td>11</td>
<td>33</td>
<td>92</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>147</td>
</tr>
<tr>
<td>Overseas (All Countries)</td>
<td></td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>0</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td>14</td>
</tr>
<tr>
<td><strong>Total:</strong></td>
<td></td>
<td>28</td>
<td>49</td>
<td>100</td>
<td>88</td>
<td>315</td>
<td>2</td>
<td>3</td>
<td>102</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>Overseas (All Countries)</td>
<td></td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>0</td>
<td>10</td>
</tr>
<tr>
<td><strong>OVERSEAS (All Countries)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>677</strong>*</td>
</tr>
</tbody>
</table>

Midwives received a Midwifery Registration for the first time in 2014. World Bank report estimated that there were only 293 midwives in PNG in 2009 registered as specialist nurses.
### Professional Categories

#### Non-active Health Care Professionals Nursing Council Register

<table>
<thead>
<tr>
<th>NO.</th>
<th>Health Care Professional by Category</th>
<th>Staff Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Aid Nurse (c) (including Enrolled Nurse)</td>
<td>3566</td>
</tr>
<tr>
<td>2</td>
<td>Educator</td>
<td>42</td>
</tr>
<tr>
<td>3</td>
<td>Enrolled Nurse</td>
<td>NA</td>
</tr>
<tr>
<td>4</td>
<td>Maternal Child Health (MCH)</td>
<td>607</td>
</tr>
<tr>
<td>5</td>
<td>Midwife Registered</td>
<td>109</td>
</tr>
<tr>
<td>6</td>
<td>Nurse Registered</td>
<td>8698</td>
</tr>
<tr>
<td>7</td>
<td>Specialist Nurse (d) (Including all types of specialist and some midwives)</td>
<td>570</td>
</tr>
<tr>
<td>8</td>
<td>Specialist Nurse - Paediatric Nurse Registered</td>
<td>NA</td>
</tr>
<tr>
<td>9</td>
<td>Specialist Nurse - Acute Nurse Registered</td>
<td>NA</td>
</tr>
<tr>
<td>10</td>
<td>Specialist Nurse - Mental Health Registered</td>
<td>NA</td>
</tr>
<tr>
<td>11</td>
<td>Specialist Nurse - Nurse Practitioner</td>
<td>NA</td>
</tr>
<tr>
<td>12</td>
<td>Community Health Worker (e) (CHW)</td>
<td>223</td>
</tr>
<tr>
<td>13</td>
<td>Unknown (categories not included in old HCPRS)</td>
<td>2371</td>
</tr>
<tr>
<td></td>
<td><strong>Grand Total</strong></td>
<td><strong>16,186</strong></td>
</tr>
</tbody>
</table>

- Over 283 designations were reduced down to 13 for the Nursing Council alone.
- 602 Medical Board professional categories aggregated into the 33 health care professional categories.
## Appendix

### A.15 Comparisons

**Comparison of Current Practicing Registrants against Old Registration Data by Province**

<table>
<thead>
<tr>
<th>No. Province</th>
<th>HCRPS Prior to 2012</th>
<th># Renewals 2014–16</th>
<th>% of Registrants</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Bougainville Province</td>
<td>553</td>
<td>152</td>
<td>27%</td>
</tr>
<tr>
<td>2 Central Province</td>
<td>153</td>
<td>25</td>
<td>16%</td>
</tr>
<tr>
<td>3 East New Britain Province</td>
<td>1111</td>
<td>276</td>
<td>25%</td>
</tr>
<tr>
<td>4 East Sepik Province</td>
<td>718</td>
<td>156</td>
<td>22%</td>
</tr>
<tr>
<td>5 Eastern Highlands</td>
<td>1003</td>
<td>304</td>
<td>30%</td>
</tr>
<tr>
<td>6 Enga Province</td>
<td>412</td>
<td>147</td>
<td>36%</td>
</tr>
<tr>
<td>7 Gulf Province</td>
<td>250</td>
<td>64</td>
<td>26%</td>
</tr>
<tr>
<td>8 Hela Province</td>
<td>14</td>
<td>2</td>
<td>14%</td>
</tr>
<tr>
<td>9 Jikawa Province</td>
<td>N/A</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>10 Madang Province</td>
<td>843</td>
<td>141</td>
<td>17%</td>
</tr>
<tr>
<td>11 Manus Province</td>
<td>239</td>
<td>28</td>
<td>12%</td>
</tr>
<tr>
<td>12 Milne Bay province</td>
<td>703</td>
<td>299</td>
<td>43%</td>
</tr>
<tr>
<td>13 Morobe Province</td>
<td>1436</td>
<td>398</td>
<td>28%</td>
</tr>
<tr>
<td>14 National Capital District</td>
<td>2471</td>
<td>818</td>
<td>33%</td>
</tr>
<tr>
<td>15 New Ireland Province</td>
<td>457</td>
<td>136</td>
<td>30%</td>
</tr>
<tr>
<td>16 Oro Province</td>
<td>326</td>
<td>95</td>
<td>29%</td>
</tr>
<tr>
<td>17 Other Country</td>
<td>172</td>
<td>6</td>
<td>3%</td>
</tr>
<tr>
<td>18 Simbu Province</td>
<td>402</td>
<td>144</td>
<td>36%</td>
</tr>
<tr>
<td>19 Southern Highlands Province</td>
<td>740</td>
<td>256</td>
<td>35%</td>
</tr>
<tr>
<td>20 Unknown</td>
<td>1720</td>
<td>1</td>
<td>0.06%</td>
</tr>
<tr>
<td>21 West New Britain Province</td>
<td>449</td>
<td>128</td>
<td>28%</td>
</tr>
<tr>
<td>22 West Sepik Province</td>
<td>434</td>
<td>130</td>
<td>30%</td>
</tr>
<tr>
<td>23 Western Highlands Province</td>
<td>1021</td>
<td>364</td>
<td>36%</td>
</tr>
<tr>
<td>24 Western Province</td>
<td>559</td>
<td>231</td>
<td>41%</td>
</tr>
</tbody>
</table>

An analysis of registrants by province, registration time period and health professional category was carried out by Nursing Council and technical adviser team. This analysis was carried out as a first step when reviewing registration system to ascertain registration data concerns (HCPRS).
A.16 Regulation and workforce

- In 2012, 157 nurses graduated in PNG, following World Bank Workforce Crisis Report 2013 and DFAT diagnostic audits\textsuperscript{7,8,9}, NDOH Workforce Enhancement Plan.

- **NDOH Maternal Health Taskforce** - Midwives received Midwifery Registration for the **first time in 2014**. World Bank report estimated that there were 293 midwives in PNG in 2009 registered as specialist nurses, with 42% retiring in 5 years.

- Lack of any reliable data registration or workforce.