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WORLD HEALTH ORGANIZATION COLLABORATING CENTRE
FOR NURSING, MIDWIFERY & HEALTH DEVELOPMENT

Community Health Workers School Diagnostic Audit

For AusAID/PNG National Department of Health

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On behalf of WHO Collaborating Centre Nursing Midwifery and Health,
University of Technology, contracted through accessUTS Pty Ltd

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Executive Summary

Between July 30 and September 27 eleven Community Health Worker (CHW) schools were audited in response to the need to diagnose quality and capacity of these schools before a projected increase in student numbers. A range of activities were used in the audit processes including four specifically designed auditing tools.

Results of auditing processes related to the theoretical and clinical learning of students, including the implementation of the 'new' curriculum are reported in this document. Results of the infrastructure audits are presented in eleven separate documents each devoted to one of the CHW schools. This format for reporting has been adopted to facilitate the implementation of the audit recommendations.

A set of national recommendations that emerged logically from the report of the teaching / learning of CHW students are given below. These recommendations have been validated by the schools' principals who also ranked the recommendations for their order of implementation. Their ranked recommendations are given in p 95-98 of this document. School specific recommendations are also made and are presented in pp.103-186.

National recommendations:

Recommendation 1

p. 15

Matters related to the salary rates of CHW teaching staff must be resolved by December 31, 2012 if the CHW schools are to continue admitting students into the CHW course. Should resolution not occur immediately the teaching programs of the CHW schools will fail.

Recommendation 2

p. 17

While it is useful to explore further the issue of raising entry requirements to the CHW course from a Year 10 to Year 12 entry requirement, in light of its impact on admission numbers and potential career paths in health services, such a decision should be considered very carefully.

Recommendation 3

p. 20

Processes related to the registration of completing CHW students are reviewed with a simpler system of registration being introduced.

Recommendation 4

p. 21

Completing CHW students should be registered promptly in order to facilitate their entry into the workforce as quickly as possible and without legal risk.

Recommendation 5

p. 21

Workshops in basic data management through effective computing systems are offered to school administrators and principals, to facilitate the accurate maintenance of school student and financial records.

Recommendation 6 *p. 24*

Names of staff entering the CHW teaching workforce are added to the HRMB payroll without delay to avoid unnecessary staff attrition and to avoid costs to church health funds.

Recommendation 7 *p. 24*

Schools where teacher student ratios are below the required ratio are assisted to recruit suitable teachers for these positions. Positions for clinical assessors need particular attention. When overall teaching allocations are made the school principal should be allocated a half teaching load to allow for more careful consideration and implementation of administrative matters.

Recommendation 8 *p. 25*

A funded secretarial position is provided by the NDoH for each of the CHW schools to enhance the administrative effectiveness of the principal. As a general principle all support staff such as cook, driver, security currently funded through CHW resources are included in an increased funding stream from the NDoH.

Recommendation 9 *p. 25*

A defined funding stream for the clinical supervision of students on clinical placements is provided by the NDoH.

Recommendation 10 *p. 29*

An overall plan for development of teaching staff in CHW is created including details of award to be undertaken, timeline and funding agency. Obligations of funded staff members need to be very clearly stated with appropriate consequences in place should staff member fail to meet contractual obligations.

Recommendation 11 *p. 31*

Funds paid by NDoH to the CHW schools annually should be reviewed. Inflation with constantly increasing costs means that the purchasing power of allocated funds is constantly being reduced. As students numbers increase the respective contribution of the NDOH should be raised to reflect that increase.

Recommendation 12 *p.34*

A workshop on data management as in Recommendation 5 should be expanded to include basic book keeping skills. Without such skill development relevant CHW staff are less likely to maintain accurate financial records and to maintain a balance between income and expenditure thus putting the financial viability of the schools at continued risk.

Recommendation 13 *p. 40*

A consistent model of financing the CHW schools acceptable to both the CHS and the NDoH is developed and used.

Recommendation 14

p. 53

Internal evaluation of program outcomes essential for continued quality improvement are more likely to occur if the teaching staff are offered a workshop related to the purposes, processes and benefits of evaluation. Such a workshop is recommended and could be incorporated within a workshop related more generally to teaching methods.

Recommendation 15

p. 54

Regular external evaluations of each of the CHW schools are implemented by the MB and NDoH with formal recommendations made for improvements in practice. These evaluations should be made at a pre-determined time and sequence and completed annually or bi-annually. Without external evaluations the quality of the teaching programs of the schools is likely to remain at existing levels and the necessary precursor of quality improvement prior to an increase in student numbers will not be achieved.

Recommendation 16

p. 59

Tutors staffing the CHWs and workplace assessors are offered a workshop that includes time management processes. This workshop should use the tools included in assessing students as exemplars for the appropriate pathways and timelines for entering all assessment results.

Recommendation 17

p. 59

Information included for tutors attending the CHW time management workshop includes the processes of maintain up to date Evidence Portfolios.

Recommendation 18

p. 64

Clarification of respective responsibilities for education of clinical staff in relation to national competency standards is obtained. Should the CHW schools be seen to carry this responsibility then additional funding is provided to the schools.

Recommendation 19

p. 66

Teaching staff in the CHW schools are updated on the quality improvement methods inherent in course evaluation and change implementation. The importance of quality improvement is not well understood by staff who do not hold a teaching qualification and those who do would benefit from refreshers on updated evaluation methods.

Recommendation 20

p. 67

Any workshop planned for addressing quality matters related to course evaluation and change implementation should be broadened to include wider matters related to quality improvement including policy development and implementation.

Recommendation 21

p. 70

A wide ranging review of the existing 'new' curriculum is strongly recommended. Preparation of the current curriculum was completed in 2004 with resources by 2006. Given that the curriculum is now being audited and that a significant number of matters related to its age and content have been identified quality improvement can only be assured prior to increasing student numbers if the current curriculum is reviewed and refreshed.

Recommendation 22

p. 74

In the proposed review of the 'new' curriculum careful attention must be paid to renewing the library resources required for teaching/learning support. In addition to refreshing the library resources list CHW schools should be provided with the listed library resource.

Recommendation 23

p. 75

Resourcing of CHW schools is a major problem. An alternate model to the current AusAID Scholarship Scheme could see monies being directly provided to the CHW schools. Instead of scholarships being allocated to individual students the same amount of money could be provided directly to the school for general supports of the student body. Monies to be used for texts by individual students would be better spent on purchasing resources to be used across the student body thus supplementing the existing scant resources used for libraries and teaching aids.

Recommendation 24

p. 79

If the AusAID Scholarship System is varied to an alternate model where monies are directed in whole to the CHW schools for dispersion across the student body, as recommended, monies allocated within this funding stream should be used for an annual print run of LRBs sufficient for each student to have their personal copy of each of the module LRBs and that they keep this LRB for future reference.

Recommendation 25

p. 86

Schools based on islands and waterways, that is; Gaubin, Kapuna and Salamo, are provided with a banana boat for the transport of students to clinical placements.

Recommendation 26

p. 86

Transport of students to clinical facilities requires a specific budget. Vehicular resources in each of the schools need renewal and most likely expansion as increased numbers of students access more and increasingly remote clinical facilities.

1. Introduction

Introduction and background

As part of its contribution to a broader project aimed at building capacity within Papua New Guinea health services, the WHO Collaborating Centre for Nursing, Midwifery and Health Development at the University of Technology, Sydney (UTS) was commissioned to undertake an audit of the Community Health Worker Training Schools across PNG between July and October 2012. The audit used a variety of tools to collect information from key stakeholders, principals, staff and students of the teaching institutions and had a twofold longer term goal — to improve the quality of the training program for Community Health Workers (CHWs), and to prepare the teaching facilities for an increase in student numbers.

This report documents the methodology, findings and conclusions of the audit and provides a number of recommendations aimed at enhancing the education and training of CHWs and supporting their deployment into the PNG health sector.

The National Department of Health (NDOH) prepared a new National Health Plan -2011-2020 (2010) (NHP) setting out the strategic directions for the development of the Papua New Guinea health sector over the next decade. That document has informed the framework under which the project reported in this document has been structured. Overall practitioner numbers were considered as part of the NHP and these have also informed the document reported here as well as its recommendations. The Higher Education Reform Strategy (2011) [HERS] clearly stated that development within teaching facilities should place emphasis on quality improvement prior to any increase in student numbers. These two documents and their key messages—to improve the quality of training and subsequently the number of students—are central to the work of the CHW audit and this report.

The World Bank (2011) in its review Papua New Guinea: Health Human Resources (HR) identified a significant issue in relation to human resource management in the health sector. The report showed there was consensus that human resources was seen as a ‘binding constraint’ impacting on the achievement of priority objectives and that specific targeted effort from all quarters would be required to address the issue. The implications for Health planning and national budgetary expenditure were seen to be significant.

As part of the PNG-Australia Partnership for Development: Health and HIV Schedule, Australia has shown a commitment to supporting PNG in increasing the size and quality of its health workforce.

For example, AusAID's PNG Health and Education Programs, working collectively, will fully fund in-country scholarships for PNG health sector professionals, including 150 to students undertaking Certificates in Community Health Worker Training as well as those for Bachelors Degree in Midwifery and Diploma/Bachelor of Nursing.

Through the collaborative efforts a number of agencies including AusAID , the Office of Higher Education (OHE) and the National Department of Health (NDoH) quality audits of training institutions have been undertaken to document activity, infrastructure and resourcing against Papua New Guinea Quality Assurance and Accreditation Frameworks. Subsequent work will include targeted funding as an incentive to implement quality improvement programs in those training institutions.

The Community Health Workforce

Numerically Papua New Guinea's health workforce is at a substantially lower level (0.25 health workers per 1 000 head of population) than that recommended (2.5 per 1 000) [World Bank, 2011]. In addition to these low numbers generally, there are specific shortfalls in key areas including the community health worker sector. An ageing health workforce will mean the loss to retirement of more than half the current workers over the next ten years. Such factors combine to make a dilemma for planners, educators and practitioners which demands attention and resources in order to bring about improvements in the delivery of health care to the people of PNG.

The World Bank report Papua New Guinea: Health Human Resources (HR) (2011) identified that

- Community Health Workers constitute about 50% of the total health service workforce at around 4 400 with 15% aged 55 years or older and due for retirement.
- An additional 41% of Community Health Workers are aged 45-54 years and due to reach retirement age over the next decade. A slightly higher proportion of these staff working in hospitals as compared to rural health services are aged over 55 years.
- Another one third of Community Health Workers are aged 35-44 years of age and will begin to reach formal retirement age in another decade.
- Around 11% of this workforce is aged less than 35 years – a proportion lower than that in the larger cohorts aged 55 years or more.

Community Health Workers are trained in one of twelve mission-run training schools across the country. These institutions share a common national curriculum and produce graduates with a Certificate in Community Health Work.

Data show that enrolments in and graduation numbers from these schools have been declining. The profile of the group has been predominantly female with significant non-completion rates. Entry requirements vary from school to school and the social and family needs of students are often taken into account in supporting their enrolment.

While the common national training curriculum is competency-based there are considerable limitations in its scope and implementation. Reviewing the scope and content of the curriculum and taking steps to enhance the teaching methodologies and practices will support the development of a better trained and supported workforce into the future.

This will also be facilitated by the introduction of robust quality assurance programs aimed at identifying and meeting developmental needs at both the level of pre-service training as well as frontline practice and service delivery of the Community Health Worker workforce.

2. Community Health Worker education

1.1 Responsibilities for Community Health Worker education

The education of CHWs has been the responsibility of the NDoH, where it was managed by the Human Resource Management Branch's Curriculum Development and Training Unit (or equivalent). In 1992 The Ministerial Task Force into Nurse and CHW Training¹ recommended that nursing and midwifery education become the responsibility of the university system under the care of the Office of Higher Education (OHE). While the NDoH has retained overall responsibility for CHW education it is not seen as part of its core business (Sutton, 2005). Instead of being provided by the NDoH, CHW education is offered through 12 church run schools. The organisational body, Christian Health Services (CHS), previously identified as the Church Medical Council (CMC) retains an organising responsibility for these 12 CHW schools. Some considerable lack of clarity between the various responsibilities of the NDoH and CHW was found when undertaking the CHW audit reported in this document.

In 1999, *The Ministerial Task Force into Nurse and CHW Training*² identified, as an urgent priority, the need to review and revise the CHW curriculum in line with the objectives of the NHP. The curriculum then being taught had been a teacher centred approach that prepared aid poste orderlies, nursing aides and Community Health Workers introduced in 1991. In July 2000, a working group comprising the HSSP Curriculum Development team³ and two staff from the NDoH's CDTU⁴ was tasked with the review. Their vision of the curriculum taken from the National Health Plan 2001-2010 was to be one that prepared 'Papua New Guinea to be a nation of healthy individuals, families, and communities where self-reliance prepared all for healthy living in a healthy island community in the 21st century' (NHP, Vol 1, p 8).

The curriculum prepared as a result of the aforementioned decision, commonly referred to in the field as the 'new curriculum', was designed around a competency-based approach. The overall aim was to shift the focus of training from a process that measured skills obtained by an individual against the group to one that focused to outcomes that measured skills against a standard performance (Community Health Worker Curriculum Program, Part 1, p xv, 2001).

The curriculum was subsequently prepared, and its implementation process has now been completed with the last schools implementing the 'new' curriculum in 2008.

2.2 CHW curriculum

The 'new' curriculum adopts an overall wellness to illness approach and is structured around five major themes that reflect this approach. These themes are:

- Professional practice
- Administration
- Health education and promotion

¹ Ministerial Taskforce under the Chairmanship of Dr Isaac Ake, *Report on the Future of Nurse and Community Health Worker Education*, February 2002, Papua New Guinea National Department of Health

² Ministerial Taskforce under the Chairmanship of Dr Isaac Ake, *Report on the Future of Nurse and Community Health Worker Education*, first interim report circa 1998, Papua New Guinea National Department of Health.

³ Expatriate adviser and 2 local advisers

⁴ A unit within the Human Resource Management Branch of NDoH

- Health protection
- Disease control

Integral to the competency approach adopted for the 'new' curriculum are five assessment principles. These principles are:

- Competency is derived from the work role
- Assessment criteria state what must be achieved to be regarded as competent
- Assessment requires performance as the main evidence but does not exclude knowledge
- Students' progress through demonstration of competence
- Instructional program facilitates development and evaluation of specified competencies (CHW Certificate Program, Part 1, p xvi, 2001).

Twenty-five competencies have been identified from the CHW role. From these competencies and the overall structure of the curriculum a series of modules has been developed. Each of the modules focuses on one of the themes referred to above and has a related set of competencies. Forty-nine modules have been prepared which vary in length and the suggested time required for their implementation. There are 7 Foundation Modules, 21 First Year Modules and 21 Second Year Modules given in the curriculum document. Suggested times given in the curriculum document for the modules vary from 1 to 20 days and 2 to 7 related clinical placement weeks. The curriculum requires 46 pre-service weeks, 18 first year clinical placement weeks, and 29 second year clinical placement weeks. It should be noted that the curriculum document does make the statement that these time divisions are suggested times because mandating times is contrary to the overall intent of a competency curriculum where students will vary in the overall time each requires to achieve competency.

An overall annual timetable has also been prepared. This prepared timetable includes suggested instructional times and sequencing for classroom work as well as sequence and times for each clinical placement.

In conjunction with the curriculum document a working group prepared learning materials for each of the modules. There is a Facilitator's Guide and a Learner's Guide for each module.

Each Facilitator's Guide (FG) is identified by a code number indicating the theme and year of presentation as well as the module topic. A consistent structure of content for the Facilitator's Guide has been developed. Each FG contains the following overall information;

- Module aim, content and training hours
- Pre- and co-requisites with underpinning modules and learning
- Training plan which includes session hours, off-the-job hours, and learning outcomes
- Assessment pieces. Assessment pieces include formative assessment (often in the form of group activities) and summative assessment which is timed for the end of module as a written test
- Assessment criteria

- Resources required for the module.

For each teaching/learning session the FG includes;

- Learning objectives for the session as well as suggested times
- Step-by-step instructions, including trigger questions for the class
- Detailed content for each of the sessions
- Resources that students can be directed to access

At the end of each FG is a set of appendices which include;

- Overhead transparencies
- End of module assessment (test)
- Answers to the end of module assessment
- References and readings used in module content
- Module feedback form for student completion at the conclusion of the module

Module Learner's Guides (LG) also follow a consistent structure with each module being identified using the same descriptive code as for the FGs. Structure of the LGs includes;

- Aim, overview of content, pre- and co-requisites
- Training plan identifying student and tutor activities
- Details of each session (hours, learning objectives identified by number, assessment criteria)
- Assessment details including conditions for both formative and summative assessment pieces
- Learning outcomes identified by number including trigger questions as well as student and facilitator activities
- Topic content with activities that may direct student to readings included at the end of the module
- Space for students to write answers to topic activities
- Appendices including details of end-of-module assessment, references, readings for the module, and module feedback form.

The comprehensive nature of both the LG and FG has a number of advantages including consistency of learning by the CHW students across the CHW schools as well as reducing the potential workload for teachers in preparing the topics to be taught and in preparing and marking assessment pieces.

The LGs also mean that students are able to work at their individual pace. For example, competent learners are able to read ahead in preparation for classroom activities.

As well as the LGs and FG, each student has a prepared Skills Logbooks (SLB) which contains a record of the placements completed along with clinical assessments undertaken while on placements. Each of the scheduled clinical placements has related skills to be completed during the placement with assessments linked to specific modules. A Skills Checklist has been developed by the CHW teachers which lists the skills required for competency and allows for an ongoing record of skills assessment. Once competency has been achieved the assessor completes the Skills Logbook assessment form and signs the assessment record. Skills Logbooks are open to examination by the Medical Board at the completion of the educational program.

An additional document, the Assessment Record Book (ARB), has been prepared for each student. The ARB contains a record of knowledge assessments of a range of types. The list of possible types includes group work, written assessments, oral presentations, assignments, and written tests taken at the end of each module. All assessment pieces completed by students are kept in an Evidence Portfolio.

At the completion of their course Community Health Workers are registered to practise by the Medical Board. The usual process is for the teaching institution to submit to the Medical Board annually a list of names of students completing the CHW program. The Medical Board then randomly selects two names from the list submitted by each school. The Evidence Portfolio, the ARB and the SLB of each of the selected students are then forwarded by the teaching institution to the Medical Board who then examine the documents. Their confirmation of the registration of the specific student group is based on this representative portfolio of evidence.

3. Audit methodology

An overall descriptive methodology was used for the project. Project objectives were to:

- Conduct an audit of all Papua New Guinea Community Health Worker Schools utilising the (draft) Papua New Guinea National Framework for the Accreditation, Monitoring and Evaluation of Community Health Worker (CHW) Education Programs (quality)
- Assess the capacity of each CHW training School to effectively double their training output (quantity)
- Identify and categorise needs (human and material resources and whether immediate, medium or long term) and provide recommendations to address these in order to support the commencement of the scholarship program in 2013.

Eleven of the twelve CHW schools across the country were to be included in the audit, the twelfth having been audited in 2011, was not included. The schools to be audited were Braun, Gaubin, Kapuna, Kumin, Lemakot, Onamuga, Raihu, Rumginae, St Margaret's, Salamo and Tinsley. Audits of the schools were to be completed in an eight week period with a week prior to the visits being set aside to meet with stakeholders and develop audit tools to be used throughout the project. As well

as the tools to be used to assess teaching activities and abilities of the schools, the infrastructure of each was also to be assessed with a purpose specific tool. The audit team, selected through a competitive process, comprised:

- International Nurse Educator (Consultant/Team Leader)
- National (PNG) Nurse Educator (Consultant)
- Infrastructure Specialist (Consultant).

A security consultant accompanied the team to all schools being audited and was involved in logistic processes required for accessing each of the schools.

Development of the audit tools occurred through a consultative group process. As well as the audit team, three senior representatives from the CHWs collaborated during the processes of tool development. Input from these representatives was crucial to development of tools that were most likely to gain relevant and accurate data. During the development of audit tools, particularly those included in Appendices B and C, the tool development group relied heavily on the Papua New Guinea National Framework for the Accreditation, Monitoring and Evaluation of Community Health Worker (CHW) Education Programs.

The tools developed and used in the audit included:

- CWH Schools Student and Staff Audit, (Appendix A)
- Accreditation Monitoring and Evaluation; standards for education programs, (Appendix B)
- Accreditation Monitoring and Evaluation; standards for clinical facilities, (Appendix C)
- Infrastructure assessment. (Appendix D)

Additionally, the following activities were undertaken in each school:

- Exploration of library facilities,
- Exploration of demonstration room and clinical teaching equipment
- Observation of a class in progress
- Observational visit to an aide post where students undertake clinical practice
- Observational visit to a health centre, sub-health centre or hospital where students undertake clinical practice
- Student focus groups
- Staff group discussion
- Existing infrastructure audit, including
 - General site assessment and location of buildings
 - Audit of each individual building, including staff housing and student accommodation
 - Audit of civil works infrastructure, eg water and power

Time available for the comprehensive processes of auditing each of the schools was two or three days. Data were collected over a nine week period. Significant logistical restraints needed to be considered while planning the timelines for data collection and would have limited the details allowable particularly with the infrastructure audit. It was found that sending the CWH Schools Student and Staff Audit tool to each institution well in advance of the arrival of the audit team facilitated data collection processes.

Because it included comparative processes, data analysis began when the first two schools had been audited. Analysis included combining data from the HCW Schools Student and Staff Audit tool and

cumulative and comparative analysis of results from the two Accreditation Monitoring and Evaluation tools. Results of the audit of school infrastructures were compared to national standards documents in order to determine the overall quality of the physical resources of each school. Results of the analysis processes are presented in the following sections of the report; Ch 4, 5 and 6.

Recommendations included in this report relate to improvements in the CHW educational system. These recommendations are both national and school specific and refer to various processes linked to a school's structure, available infrastructure, and staffing. Each recommendation is made in light of the requirement to double the intake of students to the CHW schools system thus increasing the overall CHW workforce which ultimately affects health care services of the peoples of Papua New Guinea. Recommendations included in this document are those that relate to classroom and clinical teaching/learning processes of the CHW schools including staffing matters at both national and school specific levels. Recommendations related to infrastructure are presented in separate documents, one for each of the CHW schools audited.

4. CHW Schools student and staff biographics

4.1 School descriptors

Eleven CHW schools were included in the audit. The following table includes identifiers for each of the schools.

Table 1: CHW schools included in audit

Formal identifier	Usual identifier	Sponsoring church agency	Principal
Braun Community Health Worker Training School	Braun	Evangelical Lutheran Church of Papua New Guinea	Mr Lengi Derring
Gaubin Community Health Worker Training School	Gaubin	Evangelical Lutheran Church of Papua New Guinea	Mr Tony Natile
Kapuna Community Health Worker Training School	Kapuna	Gulf Christian Services	Ms Sarah Kuriva Kaipu
Mother of the Divine Shepherd, Kumin Community Health Worker School	Kumin	Catholic Diocese of Mendi	Ms Catherine Pilang
Sacred Heart Community Health Worker School	Lemakot	Catholic Church	Ms Cathreen Songonai
Onamuga Community Health Worker School	Onamuga	The Salvation Army	Mr Peter Kuamba
Raihu Community Health Worker School	Raihu	Catholic Diocese of Aitape	Mr Leo Pasingu
Rumginae Community Health Worker Training School	Rumginae	Evangelical Church of Papua New Guinea	Mr Amos Kupaloma
St Margaret's Community Health Worker Training School	St Margaret's	Anglican Church	Ms Petra Goviro
Salamo Community Health Worker Training School	Salamo	Papua Islands Region United Church	Mr Francis Michael
Tinsley Community Health Worker Training School	Tinsley	Western Highlands Baptist Health Services	Mr Nelson Megerie

4.2 CHW School enrolments

Numbers of students enrolled in each of the CHW schools were obtained. The following tables describe enrolments in each of the schools. Table 2 presents the number of students enrolled over the period 2009-2012 by gender and year.

Table 2: Total students enrolled by gender and year

Institution	2009			2010			2011			2012		
	F	M	total	F	M	total	F	M	total	F	M	Total
Braun	22	25	47	25	24	49	33	22	59	15	14	29
Gaubin	10	13	23	15	21	36	37	32	69	22	16	38
Kapuna	16	8	24	16	8	24	13	10	23	21	19	40
Kumin	15	5	20	27	13	40	26	15	41	12	8	20
Lemakot	32	22	54	34	19	53	38	22	60	19	12	31
Onamuga	24	25	49	24	25	49	22	25	47	18	28	46
Raihu	27	9	36	49	23	72	46	34	80	19	17	36
Rumginae	14	16	30	22	24	46	25	22	47	28	22	50
St Margaret's	26	17	43	26	21	47	11	9	20	13	9	22
Salamo	24	18	42	27	20	47	35	15	50	23	17	40
Tinsley	9	12	21	26	23	49	24	12	46	29	16	45

It can be seen from Table 2 that the distribution between males and females enrolled remains relatively constant with slightly more females enrolling than males. The distribution of students along gender lines has implications for student housing with roughly the same amount of dormitory accommodation being required by females as males. This pattern of enrolment differs for Kumin where there are more female than male students. The highest number of students enrolled in any one year was 80 at Raihu in 2011 with lowest numbers being 20 at Kumin in 2009 and 2012.

Table 3 describes enrolments for each school over the time period 2009-2012 by year of course, that is by first year and second year of enrolling students.

Table 3: Students enrolled by year of enrolment

Institution	2009			2010			2011			2012		
	1 st year	2 nd year	total	1 st year	2 nd year	total	1 st year	2 nd year	total	1 st year	2 nd year	Total
Braun	25	22	47	27	22	49	36	23	59	0	29	29
Gaubin	0	23	23	36	0	36	40	29	69	0	38	38
Kapuna	24	0	24	0	24	24	23	0	23	19	21	40
Kumin	20	0	20	20	20	40	22	19	41	0	20	20
Lemakot	31	23	54	23	30	53	37	23	60	0	31	31
Onamuga	24	25	49	25	24	49	25	22	47	23	23	46
Raihu	36	0	36	41	31	72	40	38	80	0	36	36
Rumginae	30	0	30	18	30	48	29	18	47	28	22	50
St Margaret's	15	18	43	26	21	47	0	20	20	22	0	22
Salamo	22	20	42	25	22	47	34	16	50	24	26	50
Tinsley	21	0	21	30	12	42	24	27	51	23	22	45

Examination of this Table 3 shows that in 2009 there were no students enrolled in the second year of the course at Kumin, Rumginae and Tinsley. Each of these schools withheld enrolments in 2008 because they had been preparing to implement the 'new' curriculum so had no students moving

from Year 1 to Year 2 in 2009. A similar position is true for Gaubin which had no enrolments in first year for 2009 as they had enrolled students into the first year of the new curriculum in 2008 and wanted to complete one cohort of students in the new curriculum before taking students into both years.

Table 3 also shows that the schools Braun, Gaubin, Kumin, Lemakot, and Raihu enrolled no students into Year 1 in 2012. Their decision to not enrol new students at that point resulted from long standing and unresolved matters related to teaching staff salaries. Because these teachers have been employed at a church institution, as all CHW schools are, they are paid by NDoH at a casual rate which is considerably less than rates paid to CHW and nursing teaching staff in government (NDoH) nursing schools. Schools who have not enrolled students into first year in 2012 will not enrol students into the first year of the CHW course in 2013, as well as having no students in the second year of the CHW course. Nor will the remaining schools enrol students into the first year of the course. Their position will be held unless the matter of salaries between the NDoH and the CHS has been resolved. If students are not enrolled, and the staff members say that they will not be, the implications of this industrial matter on the CHW workforce are profound. This matter of student enrolment assumes even greater importance given the need of the NDoH to increase the overall CHW workforce numbers through increasing intakes into the CHW schools and not just maintaining numbers.

On the afternoon of October 3, 2012 representatives from the NDoH and the CHS met with all the

Recommendation 1

Matters related to the salary rates of CHW teaching staff must be resolved by December 31, 2012 if the CHW schools are to continue admitting students into the CHW course. Should resolution not occur immediately the teaching programs of the CHW schools will fail.

CHW principals to discuss the matter of salaries that has remained unresolved over a period of years. At this meeting new salary rates were tabled with the assertion that they would be introduced from pay 22 this year (2012). When the principals receive their increased salaries they will proceed with the enrolment of students that have generally been selected for the 2013 cohorts.

The Community Health Worker Certificate Program (Part 1) (2001), p. *xxxiii*, identifies the minimum entry requirements for CHW students. These requirements include an academic level of Year 10 school certificate. The minimum entry level of a Year 10 certificate is further specified by the schools as containing upper passes in English and Maths and at least passes in science and social science.

The following table includes the educational entry levels of students coming into each of the CHW schools.

Table 4: Student academic level on entry

Institution	2009				2010				2011				2012			
	Yr 10	Yr 11	Yr 12	other	Yr 10	Yr 11	Yr 12	other	Yr 10	Yr 11	Yr 12	other	Yr 10	Yr 11	Yr 12	other
Braun	25	0	0	0	25	0	2	0	32	0	4	0	0	0	0	0
Gaubin	0	0	0	0	36	0	0	0	34	0	0	0	0	0	0	0
Kapuna	23	0	1	24	20	0	4	24	19	0	4	23	17	0	2	19
Kumin	18	0	2	0	13	0	7	0	13	0	6	3 upgrade from yr 10	0	0	0	0
Lemakot	22	0	0	0	14	0	8	0	20	0	8	0	0	0	0	0
Onamuga	24	0	0	0	24	0	1	0	24	0	1	0	22	0	1	0
Raihu	36	0	0	0	39	0	2	0	37	0	3	0	0	0	0	0
Rumginae	11	0	19	0	4	0	14	0	2	0	27	0	2	0	26	0
St Margaret's	12	0	11	DODL* 2	11	0	13	DODL 2	0	0	0	0	9	0	11	DODL 2
Salamo	20	0	2	0	21	0	4	0	27	0	7	0	20	0	4	0
Tinsley	20	0	1	0	26	0	4	0	13	1	10	0	15	0	8	0

*Department of Distance Learning

Table 4 shows that while most students entering the CHW schools do so with a Year 10 qualification there are increasing numbers of students who hold a Year 12 qualification on entry.

Rumginae has stated its strong preference for admitting students with a Year 12 qualification and Table 4 shows its preference is translated into admission statistics. Rumginae is planning to strengthen the requirement of its students to have completed Year 12 and if an applicant otherwise presents a strong case for admission that student will be required to do an upgrade program to Year 12 standard. St Margaret's also shows its ability to attract Year 12 students into its CHW program although its statistics are not as strong as Rumginae's. Table 4 also demonstrates that Onamuga has fewest Year 12 students entering its course.

There is some discussion amongst CHW staff about increasing the qualification level of the CHW program to diploma from certificate. If this happens it is likely that the academic entry requirement for all CHW students would be raised from Year 10 to Year 12.

The principal in each of the schools has indicated the numbers of applications made each year to join the CHW course. These numbers are often in the vicinity of 400 to 1,000 applications indicating that there is intense competition for places in the CHW courses. Even with this number of applications and the subsequent competitive processes, the number of students entering with a Grade 12 education is relatively low. Staff members also suggested that students completing Grade 12 are more likely to be applying to degree level courses than to certificate programs. It is impossible to say whether raising the course level to a diploma would increase the number of year 12 applications and what career pathways in health would be left open to students who do not hold a Year 12 school qualification.

Recommendation 2

While it is useful to explore further the issue of raising entry requirements to the CHW course from a Year 10 to Year 12 entry requirement, in light of its impact on admission numbers and potential career paths in health services, such a decision should be considered very carefully.

Additional entry requirements need to be met by students entering the CHW schools and these vary from school to school. However, some are constant. At each of the schools, students need to have a Christian orientation and provide letters of recommendation. There are usually three letters required and these are from;

- Church pastor or church sponsor
- Community leader
- School headmaster/teacher

Even though each of the schools has a specific church sponsor all will admit students from religious groups other than that to which the school is affiliated. In some schools there is a conscious attempt to balance the number of students from each of the major religious groups while maintaining preference for their particular denomination. For example, at Braun and at Gaubin 50% of students are Lutheran while at Salamo 65% of students are from the United Church.

Schools make an attempt to respond to the need for CHWs in the provinces. For example, if a particular province is known to have few CHWs more applicants will be accepted from that province thus targeting groups in greater need. In contrast to this position Lemakot restricts its selection of students to New Guinea Islands region with the argument that this group is in acute need of CHW workers.

In accordance with the Community Health Worker Certificate Program (Part 1) 2001 document some schools require applicants to sit an entry test. These schools include Kumin, Onamuga, Tinsley, and St Margaret's. Gaubin had used an entry test but abolished it but will be reintroducing it if accepting students in 2013. Timing of the entry test varies with some schools using it as the first screening process for its applicants while other schools will reduce the possible contenders first and then administer the entry test to further reduce applicant numbers. Interviewing applicants is also a mechanism used for screening applications. Tinsley uses this process to assess the level of spoken English of its applicants.

Other entry requirements commonly include;

- Aged between 18 and 25 years, although Tinsley has an upper age limit of 23 years and Lemakot will accept students to the age of 30 years provided it is no longer than 10 years since completing their previous educational qualification. Schools will waive this criterion in special circumstances such as acute community need.
- A certificate of health
- No criminal record
- Being unmarried. This is a relatively common requirement although Gaubin, St Margaret's, Salamo, Lemakot, and Rumginae will accept married students provided an accompanying letter of consent from the applicant's spouse is included. St Margaret's requires that if the married applicant has children the youngest must be more than 2 years of age. Principals noted that sometimes older applicants would give their marital status as 'single' to increase their chance of selection and after admission would be found to be married.

An application fee is sometimes levied, eg. Gaubin, Kumin, Lemakot, Tinsley, Raihu

Overall the CHW schools do attempt to match the characteristics of their school's student body to overall community need. The rigorous processes of admission are instituted partly to reduce the rate of attrition from the CHW schools each year.

4.3 CHW student attritions

The following tables present data related to school student attrition rates.

Table 5: Attritions by gender and calendar year

Institution	2009			2010			2011			2012		
	F	M	total	F	M	total	F	M	total	F	M	total
Braun	2	1	3	4	2	6	6	0	6	0	2	2
Gaubin	3	2	5	2	5	7	2	0	2	0	0	0
Kapuna	1	1	2	0	0	0	2	1	3	2	2	4
Kumin	0	0	0	0	1	1	2	0	2	1	0	0
Lemakot	3	2	5	4	1	5	6	1	7	3	1	4
Onamuga	1	2	3	2	1	3	1	1	2	0	0	0
Raihu	4	1	5	5	2	7	6	2	8	0	0	0
Rumginae	3	7	10	1	1	2	3	3	6	1	1	2
St Margaret's	6	2	8	3	2	5	0	1	1	0	3	3
Salamo	0	0	0	2	7	9	2	6	8	1	0	1
Tinsley	1	1	2	2	1	3	2	0	2	0	0	0

When the attrition numbers are converted to crude percentages it is seen that the largest proportion of students withdrawing are males. Forty percent of males enrolled at Salamo in 2011 left, as did 43% of male students enrolled at Rumginae in 2009. The greatest proportion of females to withdraw was 23% from St Margaret's in 2009. There are occasions when no students withdrew from their CHW course, however.

Table 6: Attritions by year of enrolment and calendar year

Institution	2009			2010			2011			2012		
	1 st year	2 nd year	total	1 st year	2 nd year	total	1 st year	2 nd year	total	1 st year	2 nd year	total
Braun	3	0	3	4	2	6	6	0	6	0	2	2
Gaubin	0	5	5	7	0	7	1	1	2	0	0	0
Kapuna	0	2	2	0	0	0	2	1	3	2	2	4
Kumin	0	0	0	1	0	1	2	0	2	0	1	1
Lemakot	5	0	5	1	4	5	5	2	7	0	4	4
Onamuga	1	2	3	2	1	3	2	0	2	0	0	0
Raihu	5	0	5	3	4	7	4	4	8	0	0	0
Rumginae	9	1	10	1	1	2	5	1	6	1	1	2
St Margaret's	4	4	8	5	0	5	0	1	1	3	0	3
Salamo	0	0	0	9	0	9	8	0	8	1	0	1
Tinsley	2	0	0	3	0	3	2	0	2	0	0	1

Data in Table 5 show students are more likely to leave their course in the first year than in the second. Reasons given for students leaving varied, however, males were more likely to leave for disciplinary reasons while females were more likely to leave because of pregnancy.

4.4 CHW graduate numbers

Numbers of graduates from each of CHW were obtained. Table 7 gives these data.

Table 7: Number of graduates by year and gender

Institution	2009			2010			2011			2012		
	F	M	total	F	M	total	F	M	total	F	M	total
Braun	8	13	21	9	8	17	13	12	25	x	x	27 expected
Gaubin	0	0	0	0	0	0	18	12	20	13	16	29
Kapuna	6	4	10	16	8	24	0	0	0	0	0	21 expected
Kumin	7	6	13	0	0	0	15	5	20	12	7	19
Lemakot	13	10	23	14	8	22	13	9	22	NA	NA	NA
Onamuga	8	14	22	10	13	23	11	11	22	10	13	23
Raihu	14	9	23	23	7	30	14	23	37	x	x	36 expected
Rumginae	7	6	13	7	8	15	10	9	19	9	5	14
St Margaret's	11	7	18	11	10	21	11	8	19	NA	NA	NA
Salamo	12	10	22	13	3	16	21	5	26	x	x	19 expected
Tinsley	0	0	0	9	11	20	8	11	19	16	12	28

Students usually graduate in the first quarter of the year following completion of their course. In some instances students do not graduate in the year following graduation as they have not attained competency in the required skills. In these instances students are retained at the school until they have achieved competency status. In the table above it can be seen that there are cohorts of students who are yet to graduate and these are students from the 2011 second year cohort who have completed their course requirements. Schools where graduations have not yet taken place this year, are waiting on results to be forwarded from the Medical Board which is assessing the student records. Processes required by the Medical Board for the examination and registration of students are outlined on p. 10 of this report. The existing process is time consuming and seems needlessly unwieldy. Given that the curriculum taught at each of the CHW schools is a national one developed and prescribed through the NDoH, that all student assessments are provided in the CHW curriculum guides including assessment answers, and that the CHW schools are required to staff according to predetermined formulae also set out in the curriculum, a simpler process of identifying successful graduands is recommended.

Recommendation 3

Processes related to the registration of completing CHW students are reviewed with a simpler system of registration being introduced.

At the completion of their course, and following acceptance of their names by the Medical Board, students are able to register and practise as CHWs. Because of delays of many months in registration it was found that a considerable number of students accept a position and enter practice without being registered. When talking with second year students who are about four months from completion it was found that many already had been offered positions to be taken up after course completion. It was also found that the families who had funded the education of their young people were anxious for the young person to enter the workforce in order to pay back the funds used in their education and contribute financially to family welfare. While it appears that no CHW practising without registering has been sued for malpractice there is risk to the unregistered practising CHW that such an event could occur.

It is also to the country's benefit to have newly graduated CHWs enter the workforce promptly. Without the input of new graduates the need to increase total CHW workforce and correct the existing deficit cannot be met. This matter is especially relevant given the intention of the NDoH to increase the size of the workforce through the intake of increased numbers of students into the CHW schools.

Recommendation 4

Completing CHW students should be registered promptly in order to facilitate their entry into the workforce as quickly as possible and without legal risk.

Some considerable difficulties were experienced by the audit team in collecting numerical data related to student numbers. Similar but more profound difficulties were experienced in collecting financial data. The *ad hoc* introduction of computers into most schools and the numbers of staff unversed in their use appears to have made this task for willing but primarily self-taught users unnecessarily complicated. As these data are essential for efficient school management and the need for accurate financial information is acute the following recommendation is made.

Recommendation 5

Workshops in basic data management through effective computing systems are offered to school administrators and principals, to facilitate the accurate maintenance of school student and financial records.

4.5 Staff numbers and categories

The document, Community Health Worker Certificate Program (Part 1) (2001), p. xxxiv, includes details of staffing requirements for the CHW schools. Staffing numbers for schools are given as ratios with the following being included:

1:10 teacher to students in a classroom situation

1:5 teacher to students in clinical supervision

1:5 teacher to students in small group learning situations

Minimum overall staff requirements are for 1 principal, 2 tutors and 1 clinical assessor, that is a minimum staff number of 4. The following tables describe staffing complements in the CHW schools as suggested by the current principals. It can also be assessed if the staffing numbers meet overall minimum requirements.

Table 8: Staff student ratios

Institution	Category	Always	Usually	Sometimes	Rarely	Never
Braun	Lecturer 1:10	√				
	Clinical assessor 1:5			√		
	Small group leader 1:5	√				
Gaubin	Lecturer 1:10	√				
	Clinical assessor 1:5		√			
	Small group leader 1:5		√			
Kapuna	Lecturer 1:10		√			
	Clinical assessor 1:5	√				
	Small group leader 1:5		√			
Kumin	Lecturer 1:10	√				
	Clinical assessor 1:5	√				
	Small group leader 1:5	√				
Lemakot	Lecturer 1:10	√				
	Clinical assessor 1:5	√				
	Small group leader 1:5	√				
Onamuga	Lecturer 1:10			√		
	Clinical assessor 1:5		√			
	Small group leader 1:5			√		
Raihu	Lecturer 1:10		√			
	Clinical assessor 1:5		√			
	Small group leader 1:5		√			
Rumginae	Lecturer 1:10				√	
	Clinical assessor			√		

	1:5					
	Small group leader 1:5	√				
St Margaret's	Lecturer 1:10				√	
	Clinical assessor 1:5			√		
	Small group leader 1:5	√				
Salamo	Lecturer 1:10	√				
	Clinical assessor 1:5				√	
	Small group leader 1:5				√	
Tinsley	Lecturer 1:10			√		
	Clinical assessor 1:5	√				
	Small group leader 1:5			√		

Note: clinical assessor may be a person not employed by the school

The Table 5 shows considerable variation in CHW schools meeting the requirements set out in the CHW Certificate Program (Part 1), 2001, document. There appeared to be some confusion as to whether or not the Teacher to Student ratio of 1:10 applied to overall student number or to the classroom situation itself, as stated in the aforementioned document. If the ratio is actually overall teacher to student number then schools are more likely to fulfil this requirement than if the ratio was strictly related to the classroom situation. In fact, observation of classes in action showed that it was usual for there to be only one teacher in the classroom regardless of the number of students present.

Overall staff numbers and category are described in the following table.

Table 9: Current staff numbers by category

Institution	Principal		Tutors		Clinical assessor		Support staff		Unfilled positions
	Paid by NDOH	Unpaid by NDoH	Paid by NDOH	Unpaid by NDoH	Paid by NDOH	Unpaid by NDoH	Paid by NDOH	Unpaid by NDoH	
Braun	1	0	4	1	0	0	0	0	0
Gaubin	1	0	4	0	0	0	3	0	1
Kapuna	1	0	4	1	0	1	0	6	0
Kumin	1	0	3	0	0	5	0	5	3
Lemakot	1	0	4	1	0	0	3	0	1
Onamuga	1	0	4	1	0	0	0	3	1
Raihu	1	0	3	1	0	1	0	8	2
Rumginae	1	0	4	1	0	0	0	0	1
St Margaret's	1	0	5	5	1	0	0	2	2
Salamo	1	0	4	0	0	12	0	0	1
Tinsley	1	0	3	1	0	0	0	5	3

A number of things in Table 9 demand attention. The first is that there are tutor positions filled by staff not being paid by the NDoH. Each of the persons occupying these positions is usually receiving a small salary from the church agency to which the school is linked. While these staff members have fulfilled the requirements for the position as set out by the NDoH, have had their applications for employment assessed and approved by the NDoH, and their names have been submitted to HRMB, they have not been added to the list of salaried staff. In one instance a staff member has been waiting more than two years for NDoH funded wages and a twelve month wait appeared common among other staff. The practice of staff needing to wait for salaries to be funded by the NDoH adds unnecessary expenditure to the relevant church agencies.

In addition, the practice of keeping staff in unpaid positions imposes financial stress on staff members receiving a lesser income for the same work as those paid by the NDoH. It is usual for these staff members to be family people with dependents relying on the unpaid staff member for food, school fees, etc. As well as financial penalty to the unpaid staff members, the current practice increases the likelihood of these competent experienced staff leaving their positions. Replacing staff is not only time consuming but costly to both the school and NDoH which has to process the application unnecessarily using the expensive resource of time.

Table 9 also shows that schools are likely to have unfilled staff positions, a matter that is linked to the points made above. As enrolment numbers in the schools increase, as is the intention of the NDoH and a stated reason for the CHW schools' audit, it is more likely that each of the schools will attract suitable teaching staff if the matters related to delay in appropriate payments of salaries are resolved. The need to attract and retain suitable staff into the CHW schools is acute.

Recommendation 6

Names of staff entering the CHW teaching workforce are added to the HRMB payroll without delay to avoid unnecessary staff attrition and to avoid costs to church health funds.

A second matter to be noticed from the data presented in Table 9 is the overall teacher to student ratio. Two factors are important in the points to be made here. The first is that staff members are currently interpreting the 1:10 teacher to student ratio as referring to overall staff student numbers. Their position is supported by a statement in CHW Certificate Program (Part 1), 2001, document that an overall minimum staff number has been set at 4 and that an overall minimum student intake has been set at 12 per year. This statement indicates that their position in relation to interpretation of teacher staff ratios would hold. With these ratios in mind comparison of teacher to student numbers suggests that Braun, Gaubin, Kumin, Lemakot, Raihu and St Margaret's exceed the teacher student ratio of 1:10. However, as a result of an industrial matter related to teacher salary rates Braun, Gaubin, Kumin, Lemakot and Raihu did not enrol students into first year in 2012 and if they had their teacher student ratios would be at or below recommended ratios.

A third matter to be commented on in relation to teacher student ratios is the comparative workloads of teaching staff following the implementation of the 'new' curriculum. Without

exception teaching staff have described excessive workloads. The recording processes of clinical assessment results, in particular as students may require repeated assessment attempts prior to achieving competency adds to the bookwork teaching staff need to complete. One of the arguments that teachers also make when they are unable to participate in students' clinical placements is that of their excessive workload and that when a group of students is out on a placement they use that time to complete postponed clerical work related to student progress.

A possible route to relieving pressure on teaching staff, particularly that of the principal, is to exclude the principal's position from the teacher student ratios. Observational data suggest that the administrative work of the principal is time consuming and detailed making it very difficult to carry a normal teaching load as well.

Recommendation 7

Schools where teacher to student ratios are below the required ratio are assisted to recruit suitable teachers for these positions. Positions for clinical assessors need particular attention. When overall teaching allocations are made, the school principal should be allocated a half teaching load to allow time for more careful consideration and implementation of administrative matters.

School principals generally commented on the additional workload they carried from the administrative responsibilities of their position. Some schools funded secretarial support for the principal while others did not. The business of running a CHW school would be made more effective with regular secretarial help funded through the NDoH.

Recommendation 8

A funded secretarial position is provided by the NDoH for each of the CHW schools to enhance the administrative effectiveness of the principal. As a general principle all support staff such as cook, driver, security currently funded through CHW resources are included in an increased funding stream from the NDoH.

It is useful to compare data in Table 9 and Table 8. Comparison of these data show that only one school, St Margaret's, employs a clinical assessor as required by the CHW Certificate Program (Part 1), 2001, document. However, three schools state that they always have a clinical assessor to the ratio of 1:5 students, another two always fulfil this requirement, and three others sometimes do with clinical assessors coming to the school on a sessional basis. Difficulties with fulfilling this requirement are more likely to be reduced if schools were able to employ the required clinical assessors and thus meet the need for adequate supervision of students on clinical placements. A major barrier to the employment of clinical assessors is the reluctance of practitioners to move from

a fully paid government-funded clinical position to a lesser funded church-run school teaching position.

The staff members in CHW schools express strong preferences for their students to attend clinical placements in church-funded clinical facilities which could be either connected to the church agency or non-connected. In these facilities the clinical supervision of students, where offered, is regarded by clinical staff as an act of goodwill and a professional obligation. Some receive small additional funds for this work but it is not standard practice across all health care facilities or with all schools.

Each of the CHW schools receives an allocation of funds from the NDoH. As the financial data collected show (pp. 31-49), the money received is minimal and often does not meet per unit cost of CHW education including the costs of clinical placements. A need is therefore clearly apparent that per unit funding for CHW students from the NDoH is increased overall or that a dedicated stream of monies is provided by the NDoH for the supervision of students on clinical placements.

Recommendation 9
 A defined funding stream for the clinical supervision of students on clinical placements is provided by the NDoH

4.6 Staff ages

A major concern for the NDoH is an ageing workforce with CHW workers included in the department's concern. One of the drivers for this project is to stimulate the replacement of CHW workers approaching retirement age through an overall increase in CHW graduate numbers. It was decided to include the age profile of CHW teaching staff in order to test its alignment with the picture of an overall ageing CHW workforce. Table 10 shows age profiles of CHW staff.

Table 10: Teaching staff by age

Institution	<35 years	35-44	45-54	55-64	65+
Braun					
Gaubin	0	3	1	1	0
Kapuna	6	1	0	0	0
Kumin	1	2	0	0	0
Lemakot	1	1	3	1	0
Onamuga	2	3	0	0	0
Raihu	3	1	0	0	0
Rumginae	0	4	1	0	0
St Margaret's	1	4	0	1	0
Salamo	0	5	0	0	0
Tinsley	0	4	1	0	0

Table 10 shows that more of the CHW staff are within the <35-44 year old groups thus suggesting it is not typical of the health workforce as a whole. It also suggests that funds devoted to staff development would enhance a work population that is likely to remain within the health workforce for a reasonable proportion of their work lives.

4.7 Technical qualifications of teaching staff

The CHW Certificate Program (Part 1), 2001, document details the minimum educational requirements of CHW teaching staff. These educational requirements are:

Principal:

- Technical qualification; Community Health Worker (CHW), Health Extension Officer (HEO), Environmental Health Officer (EHO), or medical officer (MO),
- Degree in community health or equivalent
- Diploma in adult education or health teaching/nurse education or equivalent
- Minimum 5 years clinical experience in community rural health, preferably in PNG,
- 1 year teaching experience,
- Management and administration experience desirable,
- Professional registration as required.

Tutors:

- Technical qualification; CHW, RN, EHO, MO
- Statement of attainment in workplace training and assessment
- 5 years community rural health experience
- Professional registration as required.

Clinical assessors:

- Technical qualification; CHW, RN, EHO, MO
- Statement of attainment in workplace
- 5 years' experience in rural health clinical practice
- Professional registration

Table 11 describes the technical health qualifications of the teaching staff by position of current staff and staff numbers in the CHW schools.

Table 11: Technical qualifications of full time teaching staff by position

Institution	Staff position	Certificate	Diploma	Bachelors	Masters	PhD
Braun	Principal	√				
	Tutors	√ x 3	√			
	Clinical assessor					
Gaubin	Principal		√			
	Tutors		√ x 2	√		
	Clinical assessor					
Kapuna	Principal			√		
	Tutors		√x4	√		
	Clinical assessor	√				

Kumin	Principal		√		√	
	Tutors		√ x 2			
	Clinical assessor					
Lemakot	Principal		√			
	Tutors	√ x 2	√ x 3	√		
	Clinical assessor					
Onamuga	Principal	√				
	Tutors	√ x 2	√	√		
	Clinical assessor					
Raihu	Principal			√		
	Tutors	√	√	√		
	Clinical assessor					
Rumginae	Principal	√				
	Tutors	√ x 3	√			
	Clinical assessor					
St Margaret's	Principal	√	√	√		
	Tutors	√	√	√		
	Clinical assessor	√				
Salamo	Principal		√			
	Tutors	√ x 2	√ x 2			
	Clinical assessor					
Tinsley	Principal		√			
	Tutors		√ x 2			
	Clinical assessor					

Table 11 shows that all principals held a technical qualification. It also shows that only principals of Kapuna, Kumin, Raihu and St Margaret's hold a technical qualification at degree level thus fulfilling CHW requirements. The principal at Kumin holds a master degree and Kapuna, Raihu and St Margaret's principals hold a bachelor qualification. Tutors at all schools held a technical qualification at either certificate or diploma level while a tutor at Onamuga held a degree in environmental health and tutors at Gaubin and St Margaret's also held a degree. Statements of attainment were provided when the staff were employed and could not be accessed.

Reading Table 11 shows that Kapuna and St Margaret's were the only schools to employ a clinical assessor. Some of the schools have tutors going out to work with students undertaking clinical placements but this is not a practice adopted at all schools and may require the school to offer incentive payments to staff to undertake this role. Much of the supervision and assessment of students out on clinical placements is performed by the clinical staff of the facility where students are placed. The main reason given by teaching staff for not accompanying students is related to academic work and the teaching load of teachers.

4.8 Education qualifications of CHW staff

The stated requirements in the CHW Certificate Program (Part 1), 2001, document for teaching staff to also hold an education qualification is limited to the principal. However, a teaching qualification is held more widely across the CHW teaching staff. Table 12 shows the qualifications held and distribution of education qualifications.

Table 12: Education qualifications of full time teaching staff

Institution	Certificate (not a formal qualification)	Diploma	Bachelors	Masters	Total staff number	Percent with teaching qualification
Braun	0	6	0	0	0	
Gaubin	0	3	0	0	5	60%
Kapuna	0	2	1	0	0	60%
Kumin	1 (Certificate of participation)	2	0	0	3	66%
Lemakot	0	4	0	0	6	67%
Onamuga	0	4	0	0	5	80%
Raihu	0	2	0	0	4	50%
Rumginae	1(Certificate of participation)	2	0	0	5	40%
St Margaret's	0	5	0	0	6	84%
Salamo	1	0	0	0	5	0%
Tinsley	0	3	0	0	4	75%

Overall impressions of the quality of the teaching of students in the CHW schools indicate a strong correlation between the teaching qualifications held by the staff and the quality of the schools' teaching programs. Schools where staff members hold teaching qualifications demonstrate more advanced and effective teaching practices than schools where teaching qualifications are not held by staff members.

Principals were asked about staff development plans. A general response to this question was that staff development plans are limited by the availability of funds. Staff members need to be financially supported in order to undertake study and it appeared that some church organisations were more likely to fund the educational development of their staff than others. For example, the staff of the Salamo CHW school saw very little likelihood of their being funded to undertake studies for teaching qualifications whereas staff development plans at Gaubin were well stated with existing staff being aware of when they would be offered the chance of post basic study. When staff undertake a funded development program it is usual for them to be contracted to the funding school for a stated period of time following completion of that post basic qualification. It seems, however, that if a teacher did not fulfil these contractual requirements no action was taken.

If the quality of the CHW schools is to be improved prior to the increase in student numbers, as is a demonstrated need, acceptable staff development strategies need to be implemented. It may be

useful for an overall development plan for CHW staff to be prepared with realistic timelines in order to correct the existing deficit in staff education qualifications.

Recommendation 10

An overall plan for development of teaching staff in CHW is created including details of award to be undertaken, timeline and funding agency. Obligations of funded staff members need to be very clearly stated with appropriate consequences in place should staff member fail to meet contractual obligations.

4.9 Clinical and teaching experience of CHW teaching staff

As well the requirements related to teaching staff qualifications, teaching staff members also need to meet requirements related to clinical experience prior to entering the CHW school system. These requirements are listed above, p. 27. Table 13 presents the clinical experience of the teaching staff as both staff total and mean years.

Table 13: Total years clinical experience of full time teaching staff

Institution	Clinically qualified teaching staff	Clinically unqualified teaching staff	Total staff mean
Braun	72	0	12
Gaubin	13	18	6.2
Kapuna	34	8	6
Kumin	15	0	7.5
Lemakot	57	0	9.5
Onamuga	35	0	7
Raihu	20	16	9
Rumginae	49	0	12.4
St Margaret's	30	8	6
Salamo	55	0	11
Tinsley	33	0	8.3

As a general rule each staff member met the requirements for clinical experience prior to entering their respective CHW schools. The one exception was for a Bachelor in Environment Health teacher employed at Onamuga who had taken up a teaching position without any practice experience since graduation. A Bachelor of Health Extension Officer has been appropriately employed to teach at Raihu but has some prior practice experience.

Although required years of teaching experience has not been specified in the CHW Certificate Program (Part 1), 2001, document, teaching staff were also asked how many years teaching experience each had. Table 14 presents these data.

Table 14: Years teaching experience of full time teaching staff

Institution	Clinically qualified teaching staff	Clinically unqualified teaching staff	Total staff mean
Braun	48	0	8
Gaubin	59	4	12.6
Kapuna	28	8	7.2
Kumin	21	0	7
Lemakot	103.5	1	17.25
Onamuga	26	1	6.5
Raihu	8	0	4
Rumginae	36	0	6
St Margaret's	30	0	6
Salamo	60	15	13.5
Tinsley	22	0	5.5

The table above demonstrates that there is considerable teaching experience amongst the staff of the CHW schools. The number of years of experience indicates that most staff entered the CHW schools system prior to the implementation of the 'new' curriculum. Their history of experience with both the old and 'new' curricula allows them to make more accurate comments on the comparative workloads of the two curricula as well as the practice and learning outcomes of these courses of study.

The next section of the report details the financial status of each of the CHW schools. In order to more clearly present the financial details of each of the schools will be presented separately.

4.10 Financial information

This section of the chapter reports details the financial status of each of the CHW schools. In order to more clearly present the financial details of each of the schools will be presented separately. Three major groups of information will be presented. These groups are school income, school expenditure and unit costs per graduate for each of the schools derived from each of the school's expenditure. Obtaining financial information proved difficult and in some instances the informant stated that the numbers given may well be approximations. In one school few records existed of expenditures and the information for that school is incomplete. Differing models of financial organisation and record keeping were found. Some schools manage their finances themselves while others have funds managed externally by the associated church agency. As with other tables the schools are presented alphabetically.

Table 15 Braun total budget by source of income

Years	NDoH salaries	NDoH	School agency	Donors	Tuition fees	Others	Total
2009	77217.44	90000	3000	0	49590.20	5000	224807.64
2010	65780.06	90000	0	0	51100	960.0	207840.06
2011	76018.82	90000	0	0	60420	324.9	226743.72
2012	76018.82	67500	0	150000	47800	0	341318.82

Although the salaries paid by the NDoH go directly to the staff members bank accounts these are included in overall income as they bear a direct relationship to the costs incurred in running each of the CHW schools. Monies coming annually from NDoH are an allocation made to each of the CHW schools. There were some differences of opinion as to whether this allocation of funds was directly related to student number or not. The more general opinion was that this amount was independent of student number as the above table would suggest. Concern was expressed by CHW staff members that should student number increase and the allocation received from the NDoH stay the same the CHW school budget would be grossly inadequate.

Recommendation 11

Funds paid by NDoH to the CHW schools annually should be reviewed. Inflation with constantly increasing costs means that the purchasing power of allocated funds is constantly being reduced. As student numbers increase the respective annual contribution of the NDoH should be raised to reflect that increase.

Table 16 Braun total expenditure by category

Expenditure	2009	2010	2011	2012
Salaries	77,217.44	65,780.06	76,018.82	76,018.82
Teaching costs				
Teaching aids and materials	10,467.80	13,160.60	15,677.60	7,420.40
Student food and accommodation	41,832	44,401.22	54,837.40	37,996.1
Student travel and books	15,160	17,226	21,460.44	13,460.90
IT (computing and internet)	4,126.1	9,426.4	12,100	446.90
Uniforms	3,429.4	4,068.16	4,920.11	0
Library	0	0	0	0
Other	6,344.2	5,291	4,105.1	1,240
Sub-total teaching costs	158,576.94	159,353.88	188,119.47	136,583.12
Operational costs				
Administration materials	18,524.4	21,605	22,216	11,426.1
Assistants' salaries	13,166.5	17,966.5	13,602.58	7,922.48
Maintenance	6,427.01	10,130.98	12,902.1	36,441.20
Vehicle and plant costs	16,581.2	18,060	22,329.4	906.9
Power	6,534	7,481.84	10,201.48	6,211.22

Water	0	0	0	0
Telephone	0	0	0	0
Other	4,520.1	3,200	5,421.6	3,112.4
Sub-total operational costs	65,750.21	78,443.82	86,753.16	65,320.3
Total expenditures	224,327.15	237,797.7	274,872.63	201,903.42

Comparisons of Table 15 and 16 show that expenditure for the years 2009-2011 total expenditures as expressed by these figures exceeds total income. Financial pressures on the CHW schools are a matter of grave concern for the CHW school principals and staff generally. Information on how deficits were made up could not be obtained.

Table 17 Braun cost per unit

Year	Total student number	Total cost <i>kina</i>	Cost per unit <i>kina</i>
2009	47	224,807	4,783.14
2010	49	237,807.64	4,853.01
2011	59	274,872.63	4,658.86
2012	29	201,903.42	6,962.17

Table 17 shows that there is a relationship between student enrolment and per unit cost of each completing student. At Braun when more students are enrolled the cost per unit is lower than when there are fewer students enrolled. It should be noted here that the costs for 2012 are incomplete costs as the year is not yet complete. While some costs, such as the salary costs of the teaching staff and student food and accommodation, have been calculated to reflect the annual cost others such as transport costs will rise as the year comes to its end.

The audit team experienced greater difficulty obtaining financial information from Gaubin than from any other of the CHW schools. Some financial information was simply not obtainable. Models of keeping financial details for each of the schools varied depending on the agency to which that school was related. In some institutions the church agency kept the financial records and in others these records were maintained by the school. Gaubin falls within the latter category.

Table 18 Gaubin total budget by source of income

Years	NDoH salaries	NDoH	School agency	Donors	Tuition fees	Others	Total
2009	80,219	90,000	0	0	79,800	0	249,019
2010	80,219	90,000	0	0	144,900	0	315,119
2011	67,417.12	90,000	0	0	75,600	0	233,017.12
2012	67,417.12	90,000	0	0	11,500	0	168,917.12

Table 18 shows that this school has received no additional funds from school agency, donors or others. It also shows the wide variation in tuition fees occurring as a result of changes in the fees levied and student number.

Table 19 Gaubin total expenditure by category

Expenditure	2009	2010	2011	2012
Salaries	67,417.12	67,417.12	80,219	80,219
Teaching costs				
Teaching aids and materials	26650.41		13,883.10	
Student food and accommodation	36,190		82,190.84	
Student travel and books	16,704		27,055	
IT (computing and internet)				
Uniforms	13,859.30			
Library				
Other				
Sub-total teaching costs	160820.83		203348.84	
Operational costs				
Administration materials	3,419.35		5343.07	
Assistants' salaries	13,130.61		8340	7800
Maintenance	24,762.64		3451.2	
Vehicle and plant costs	5,813.47			
Power	4,200			
Water				
Telephone				
Other	11,069.54		65942.92	
Sub-total operational costs	62,455.16		83,077.19	
Total expenditures	223,275.99		286,426.03	

Data of school expenditure recorded in Table 19 are all that was obtainable from Gaubin. The clear message that comes from this table is that CHW may indeed have very limited skills in maintaining financial records.

Recommendation 12

A workshop on data management as in Recommendation 5 should be expanded to include basic book keeping skills. Without such skill development relevant CHW staff are less likely to maintain accurate financial records and to maintain a balance between income and expenditure thus putting the financial viability of the schools at continued risk.

Table 20 Gaubin cost per unit

Year	Total student number	Total cost <i>kina</i>	Cost per unit <i>kina</i>
2009	23	223,275.99	9,707.61
2010	36		
2011	69	286,426.03	4,151.1
2012	38		

Even though the financial records of Gaubin are incomplete these available costs per unit again demonstrate an inverse relationship between student number and cost per unit.

Table 21 Kapuna total budget by source of income

Years	NDoH salaries	NDoH	School agency	Donors	Tuition fees	Others	Total
2009	41,237.72	90,000	0	70,000	25,350	0	215,637.72
2010	43,921.72	90,000	0	8,000	15,600	0	157,521.72
2011	24,165.44	90,000	0	8,000	14,950	0	137,115.44
2012	36,334.11	90,000	0	0	25,350	0	151,684.11

It appears that Kapuna charges the lowest tuition fees across the CHW school sector. Fees are expected to be increased in 2013.

Table 22 Kapuna total expenditure by category

Expenditure	2009	2010	2011	2012
Salaries	41,237.72	43,921.72	24,165.44	36,334.11
Teaching costs				
Teaching aids and materials	4,500	4,500	4,500	0
Student food and accommodation	26,560	28,512	23,025	16,830
Student travel and books	1,000	9,000	9,000	1,315
IT (computing and internet)	0	0	0	0
Uniforms	1,096	1,096	1,096	1,096
Library	0	0	0	0
Other	0	0	0	0
Sub-total teaching costs	74,393.72	87,029.72	61,786.44	55,575.11
Operational costs				
Administration materials	4,886	8,367.7	4,991.90	952.37

Assistants' salaries	30,236.95	22,935.43	21,106.23	26,541.88
Maintenance	0	0	7,627.44	247
Vehicle and plant costs	0	0	0	0
Power	19,920.80	13,548	18,619.50	8,559
Water	0	0	0	0
Telephone	1,000	1,057.38	1,210	320
Other	3,210	5,737	4,217	4,938.80
Sub-total operational costs	59,254.75	51,645.51	57,772.07	41,559.05
Total expenditures	133,647.47	138,675.23	119,558.51	97,134.16

Table 23 Kapuna cost per unit

Year	Total student number	Total cost <i>kina</i>	Cost per unit <i>kina</i>
2009	24	133,647.47	5,568.64
2010	24	138,675.23	5,778.13
2011	23	119,558.51	5,198.19
2012	40	97,134.16	2,428.34

Costs per unit appear to be lower at Kapuna than in any of the CHW schools.

Table 24 Kumin total budget by source of income

Years	NDoH salaries	NDoH	School agency	Donors	Tuition fees	Others	Total
2009	63,108.99	135,999.5	2,000	0	42,000	550,000	1,243,108.49
2010	63,108.99	72,000	2,000	2,700,000.0	52,500	500,000	3,389,608.99
2011	90,514.55	73,800	10,000	0	55,000	0	228,314.55
2012	46,029.36	36,900	2,000	0	2,900	15,500	103,329.38

Examining Table 24 shows a vital matter. The staff members, particularly the principal, at Kumin have been very successful in raising additional funds for this school. The school agency is a regular contributor to the school budget, a large sum of money was obtained from a local mining group and other contributions, some from the provincial office, have meant that this school is not entirely dependent on annual monies coming from the NDoH. An example of the proactive approach to fundraising is the document presented to the audit team when the school was visited. It is interesting that the budget income line from the NDoH is seen here to reflect student number while at other schools this income remains constant. Tuition fees are generally a greater source of income at Kumin than in many of the CHW schools but the school continues to attract large numbers of applications annually.

Table 25 Kumin total expenditure by category

Expenditure	2009	2010	2011	2012
Salaries	75,010.99	75,643.59	63,108.99	46,108.99
Teaching costs				
Teaching aids and materials	8,928.7	9,862.74	18,649.32	1,773.4
Student food and accommodation	27,020.35	29,096.7	57,689.24	19,026.7
Student travel and books	1,297.8	2,293	1,540	1,716
IT (computing and internet)	9,241.51	16,622	2,554.9	0
Uniforms	500	645.5	5,330	0
Library	0	0	0	0
Other	0	0	0	0
Sub-total teaching costs	121,999.35	268,327.06	148,872.45	137,250.18
Operational costs				
Administration materials	19,731.77	3,355.2	13,300	4,620.19
Assistants' salaries	968	25,724.66	11,366.5	10,618.88
Maintenance	52,450.5	4,071.59	17,214.1	8,038
Vehicle and plant costs	1,195.68	1,760.76	1,988.77	1,923
Power	1,601.17	1,328.11	2,617.95	6,949.56
Water	0	0	0	0
Telephone	310	0	0	379.34
Other	11,474.3	1,000,000	3,029,426.1	96,000
Sub-total operational costs	87,731.4	1,036,240.32	3,075,903.42	128,529.85
Total expenditures	209,730.77	1,304,567.38	3,224,785.87	265,780.03

Kumin has been able to engage in an active building program because of its success in raising funds for the school. Some school expenditures this year have yet to be shown on Table 25. For example, Kumin has very recently purchased a computer mainframe and server and seven screens that are now in the student library. Students are taking weekly lessons in basic computer use. These computers are not connected to an internet server.

One of the things most frequently mentioned by students in the focus groups held with them by the audit team was a request for computing facilities. While considerable problems related to system maintenance in isolated area continue, as well as in monitoring student access should these computers be connected to the internet, the argument that students frequently put about a direct

relationship between clinical professionalism and internet usage has some value. It is difficult to list purchasing computers across the student sector as a high level recommendation, however.

Table 26 Kumin cost per unit

Year	Total student number	Total cost kina	Cost per unit kina
2009	20	1,243,108.49	62,155.42
2010	40	3,389,608.99	84,740.22
2011	41	228,314.55	5,568.65
2012	20	103,329.38	5,166.46

Costs per unit as shown in Table 26 include a markedly raised cost for the years 2009-10. These costs are an expression of the costs of building new facilities at the Kumin School.

Table 27 Lemakot total budget by source of income

Years	NDoH salaries	NDoH	School agency	Donors	Tuition fees	Others	Total
2009	54,271.10	108,006	0	0	21,000	5,000	188,440
2010	68,280.68	108,000	0	0	21,000	10,000	292,280.68
2011	82,290.18	108,000	0	0	120,000	20,000	330,290.18
2012	82,290.18	60,375	0	0	56,000	44,000	242,665.18

Lemakot also has had some successes in raising funds for the school. Their additional funds have primarily been sourced from the local area including the local member of government.

Table 28 Lemakot total expenditure by category

Expenditure	2009	2010	2011	2012
Salaries	65,824.24	82,655.86	93,413.2	87,718.68
Teaching costs				
Teaching aids and materials	4,297.05	6,110.35	4,010.96	6,662.65
Student food and accommodation	47,411.30	60,618.25	84,663.17	28,622.62
Student travel and books	11,086.85	4,370.0	5,072.05	3,457
IT (computing and internet)	0	0	0	0
Uniforms	2,000	6,260	1,009.4	0
Library	0	4,000	2,242	0
Other	1,353.39	15,851.54	9,767.84	3,060.45
Sub-total teaching costs	131,972.83	15,851.54	9,767.84	3,060.45

Operational costs				
Administration materials	4,144.41	11,744	9,600.19	10,370.5
Assistants' salaries	8,921.1	12,013.4	19,936.8	8,087.5
Maintenance	62,469.92	27,071.19	30,951.08	11,117.05
Vehicle and plant costs	18,248.91	20,800.02	25,204.14	15,264
Power	12,834.51	1,079.72	11,010.24	7,344.45
Water	0	0	0	0
Telephone	0	421.5	1,176.9	1,030.6
Other	13,600.73	12,782.27	20,471.04	7,749.9
Sub-total operational costs	120,219.58	85,922.25	118,350.39	60,964.4
Total expenditures	252,192.41	265,787.71	318,529.01	190,485.8

One of the things that can be seen in the Lemakot expenditure is that it has spent monies on library resources. The texts obtained are kept separate to the general library that students' access and these valuable nursing and health related texts are accessible by students only under supervision of a teaching staff member.

For the years 2009, 10 Lemakot spent more money that it obtained. In 2011 it spent less and in 2012 it has also spent less but the year is not yet complete. While it has not enrolled students this year the costs of student food and accommodation are not the full costs for the year.

Table 29 Lemakot cost per unit

Year	Total student number	Total cost kina	Cost per unit kina
2009	54	188,240	3,485
2010	53	292,280	5514
2011	60	330,290	5504
2012	31	292,665	7,827

Costs per unit at Lemakot are seen to generally increase year by year with the cost per unit also showing a direct relationship to student enrolment numbers.

Table 30 Onamuga total budget by source of income

Years	NDoH salaries	NDoH	School agency	Donors	Tuition fees	Others	Total
2009	49,295.04	154,000	0	0	122,500	15,000	340,795.04
2010	37,822.32	90,000	0	0	147,980	28,000	303,802.32
2011	50,208	90	0	1,200	188,940	10,000	340,348
2012	50,208	90,000	0	0	184,920	10,000	335,128

The audit team experienced some considerable difficulty in obtaining financial data at Onamuga. Part of this difficulty was that the records of income and expenditure were maintained by the school agency external to the school and not easily accessed by the principal.

The difficulty experienced in obtaining financial information is evident in Table 31 where many of the figures were stated to be estimations of actual expenditures. As the responsibilities of church agency towards the CHW school system seem quite unclear and flexible it may add to the efficiency of school management if a consistent model of management is explored and adopted. One alternative to improve school financial management would be much greater clarity as to the respective responsibilities of the CHS and the NDoH.

Recommendation 13
A consistent model of financing the CHW schools acceptable to both the CHS and the NDoH is developed and used.

Table 31 Onamuga total expenditure by category

Expenditure	2009	2010	2011	2012
Salaries	72,423.04	60,952.32	58,996	61,117.91
Teaching costs				
Teaching aids and materials	0	0	0	0
Student food and accommodation	40,500	24,300	25,360	15,275
Student travel and books	6,500	6,500	6,500	6,500
IT (computing and internet)	8,000	6,000	3,000	0
Uniforms	2,700	2,880	3,020	2,500
Library	0	0	0	0
Other	1,500	1,500	6,231.66	5,400
Sub-total teaching costs	131,623.04	102,132.32	101,107.66	90,792.91
Operational costs				
Administration materials	18,567	14,158	9,969.3	1,356.6
Assistants' salaries	7,200	0	0	0
Maintenance	6,800	8,650	2,633.98	2,954.66
Vehicle and plant costs	21,050	23,500	0	19,043

Power	3,850	3,850	3,314.37	4,564.93
Water	0	0	0	0
Telephone	4,409	4,409	4,581.14	5,852.32
Other	20,200	15,127	0	18,440.8
Sub-total operational costs	82,176	69,694	20,498.8	52,212.31
Total expenditures	213,799.04	171,826.32	125,606	143,005,22

Records of expenditures given by the respondents, show that no monies have been spent on teaching resources. No monies have been spent on the library over the last four years. It is very difficult for a school to maintain quality when these major contributors to quality resources are ignored. When asked why no monies have been spent on these resources the response given was that there was no money available to spend.

Table 32 Onamuga cost per unit

Year	Total student number	Total cost <i>kina</i>	Cost per unit <i>kina</i>
2009	49	213,799.04	4,363.25
2010	49	303,802.32	6,200.5
2011	47	121,606	2,587,37
2012	46	143,005.22	3,108.81

There is noticeable variation in the cost per unit over the four years from which these data have been given. These variations may have little validity given the estimations in expenditure commented on above.

Table 33 Raihu total budget by source of income

Years	NDoH salaries	NDoH	School agency	Donors	Tuition fees	Others	Total
2009	46,104	108,000	0	0	47,319.75	15,133.24	214,556.99
2010	67,344.9	113,400	0	0	113,316	30,212.79	211,031.09
2011	67,344.9	121,500	0	15,055	139,995	75,765.4	419,660.3
2012	31,070.4	63,000	0	190,500	80.770	26,719.5	392,059.9

Raihu shows success in obtaining income additional to that from the NDoH. These income streams are from donors and others. Others include the PHO and result from the active lobbying of that office by the school principal. Similar to many of the other CHW schools there has been no income to the school from the church agency to which it is connected.

Table 34 Raihu total expenditure by category

Expenditure	2009	2010	2011	2012
Salaries	46,104	71,344.60	67,344.90	31,070.40
Teaching costs				
Teaching aids and materials	9,607.99	12,061.8	18,496.08	5,352.85
Student food and accommodation	63,299.55	83,440.95	91,625.83	27,673.75
Student travel and books	2,501	18,890.8	49,205.15	21,113
IT (computing and internet)	0	407	71.50	0
Uniforms	0	0	1,200.0	0
Library	0	0	0	0
Other	0	0	0	0
Sub-total teaching costs	121,512.54	372,290.30	93,253.66	85,210.0
Operational costs				
Administration materials	10,023.99	3,423.73	4,887.09	7,871.45
Assistants' salaries	30,309.66	38,551.07	56,645.10	40,014.53
Maintenance	44,928.34	3,854.1	19,373.73	32,802.52
Vehicle and plant costs	14,381	20,812.80	31,353.4	24,357.85
Power	4,396.05	4,779.13	2,026.25	2,052.12
Water	0	0	0	0
Telephone	7,479.30	6,088.11	4,820.71	354.0
Other	8,670.80	21,714.20	39,909.35	17,972.42
Sub-total operational costs	120,189.14	99,223.14	159,015.63	125,430.89
Total expenditures	241,701.68	471,513.44.	252,269.29	210,640.89

Balance between income and expenditure at Raihu also shows variation in a positive or negative balance. The overrun of expenditure in 2010 would be counterbalanced by the additional income obtained in 2011. The positive difference between income and expenditure in 2012 partly results from decrease in expenditure from fewer students being enrolled.

Table 35 Raihu cost per unit

Year	Total student number	Total cost kina	Cost per unit kina
2009	36	241,701.68	6,713.9
2010	72	471,513.44	6,548.8
2011	80	252,269.29	3,153.4
2012	36	210,640.89	5,851.1

Table 36 Rumginae total budget by source of income

Years	NDoH salaries	NDoH	School agency	Donors	Tuition fees	Others	Total
2009	87,996.48	88,000	0	0	60,000	30,000	265,996.48
2010	87,996.48	108,000	0	10,000	96,000	0	301,996.48
2011	87,996.48	108,000	0	0	117,500	25,000	338,496.48
2012	87,996.48	108,000	0	45,000	125,000	20,000	385,996.48

The steady increase in income at Rumginae shown between years 2009-12 appears to partly come from a rise in monies from the NDoH. Again the situation is shown where the school agency makes no financial contribution to the school but it has been successful in obtaining funds from donors and other.

Table 37 Rumginae total expenditure by category

Expenditure	2009	2010	2011	2012
Salaries				
	87,996.48	87,996.48	87,996.48	93,596.48
Teaching costs				
Teaching aids and materials	30,000	30,000	37,000	30,000
Student food and accommodation	80,000	92,000	92,000	50,000
Student travel and books	2915	16,500	16,500	15,000
IT (computing and internet)	10,000	5,000	12,000	20,000
Uniforms	20,000	22,000	22,000	0
Library	5,000	4,200	0	10,000
Other	3,000	7,000	6,000	0
Sub-total teaching costs	231,911.48	264,696.48	273,496.48	218,596.48
Operational costs				
Administration materials	15,000	15,000	17,000	NA

Assistants' salaries	16,000	20,000	20,000	20,000
Maintenance	20,000	10,000	25,000	40,000
Vehicle and plant costs	10,000	15,000	18,000	25,000
Power	0	0	0	0
Water	0	0	0	0
Telephone	5,000	5,600	6,700	NA
Other	8,500	12,000	13,000	10,000
Sub-total operational costs	74,500	77,600	99,700	72,500
Total expenditures	306,411.48	342,296.48	373,196.48	291,096.48

Expenditures exceeding income are evident at Rumginae except for the incomplete year 2012. Unlike most of the schools there has been considerable monies spent by Rumginae in computing equipment and the internet and the importance with which the school library is regarded finds expression in funds being expended on library resources.

Table 38 Rumginae cost per unit

Year	Total student number	Total cost kina	Cost per unit kina
2009	30	306,411	10,213
2010	48	342,296	7,131
2011	47	373,196	7,940
2012	50	291,096	5,821

A relationship between student number and unit costs are again clearly demonstrated by the figures in Table 38. The lowest per unit costs are when the school has maximised its enrolment numbers with the highest being for the lowest enrolment numbers.

Table 39 St Margaret's total budget by source of income

Years	NDoH salaries	NDoH	School agency	Donors	Tuition fees	Others	Total
2009	82,544.54	108,000	0	0	54,000	0	244,544.54
2010	82,544.54	108,000	0	0	72,000	0	262,544.54
2011	82,544.54	108,000	0	0	60,000	0	250,544.54
2012	82,544.54	108,000	0	0	66,000	0	256,544.54

Income for St Margaret's school has come entirely from student fees and the NDoH and budgets are maintained external to the school. An anomalous situation was described by the school principal where the school had received an additional k64, 000 from the NDoH in 2009 but these monies were taken from the school account by the school agency and cannot now be traced. There has been a change of principal since the monies were received, and taken, with the current principal now trying hard to establish what happened to the funds that were received and that need to be accounted for.

The position at St Margaret's where funds are very difficult to trace emphasises the difficulties that exist with lack of clarity in responsibility carriers.

Table 40 St Margaret's total expenditure by category

Expenditure	2009	2010	2011	2012
Salaries	89,623.4	100,490.67	95,771.06	90,899.63
Teaching costs				
Teaching aids and materials	1,020.0	2,393.14	2,988.05	0
Student food and accommodation	33,635.23	43,127.72	18,499.08	9,688.25
Student travel and books	4,832.0	5,098	2131.64	0
IT (computing and internet)	750	0	803.78	0
Uniforms	2,352.9	903.1	544.50	0
Library	0	0	0	0
Other	7,944.65	16,857.02	0	1,459.64
Sub-total teaching costs	140,158.18	168,869.65	120,738.11	92,359.27
Operational costs				
Administration materials	18,671.5	22,279.75	22,502.16	11,487.96
Assistants' salaries	12,247.15	4,116	9,603.65	7,041.75
Maintenance	23,967.85	38,090	5,177.09	3,023.54
Vehicle and plant costs	14,030.07	8424.82	5,361.58	2,952.38
Power	4,818.15	7,336.18	9,459.2	6,385.86
Water	4,885.29	7,890.46	7,761.08	6,331.85
Telephone	7,435.34	8,444.48	12,788.02	8,669.25
Other	27,216.94	18,834.85	18,779.83	1,910.98
Sub-total operational costs	113,281.21	115,416.54	91,323.61	47,803.57
Total expenditures	253,439.39	284,286.19	212,061.72	140,162.84

As a general rule St Margaret's spends more money that it receives. Some expenditure related to teaching aids has been made but not to the library.

Table 41 St Margaret's cost per unit

Year	Total student number	Total cost kina	Cost per unit kina
2009	43	253,439.39	5,893.94
2010	47	204,286.19	6,048.64

2011	20	212,061.72	10,603
2012	22	140,162.84	6,371

There appeared to be no obvious reason why the unit cost in 2011 was markedly higher than for the other three years recorded in this audit. It was the year with the lowest student number which is consistent with data trends. The year 2012 has a per unit cost that is similar to the other two years but is likely to increase as the costs for the year are not all included in the expenditure table.

Table 42 Salamo total budget by source of income

Years	NDoH salaries	NDoH	School agency	Donors	Tuition fees	Others	Total
2009	68,902.7	72,000	4,500	0	31,500	0	176,902.7
2010	68,902.7	72,000	2,700	500	42,300	0	186,102.7
2011	68,902.7	72,000	3,200	0	75,000	0	219,102.7
2012	68,902.7	72,000	400	0	75,000	0	216,302.7

The NDoH appeared to resource the Salamo School at a lower rate than most of the others and its income was considerably less than other schools. No apparent reason was given for this difference. The school agency, however, made an annual, but variable, contribution to school funds.

Table 43 Salamo total expenditure by category

Expenditure	2009	2010	2011	2012
Salaries	68,902.7	68,902.7	68,902.7	68,902.7
Teaching costs				
Teaching aids and materials	35,774.6	34,314.07	38,200.45	10,673.48
Student food and accommodation	35,774.6	34,314.07	38,200.45	10,673.48
Student travel and books	3,903.0	1,000.0	1,595.0	700.0
IT (computing and internet)	767.0	2,000.0	1,199.0	1,256.0
Uniforms	NA	NA	NA	NA
Library	0	0	0	0
Other	0	0	0	0
Sub-total teaching costs	109,347.3	106,216.77	109,897.15	81,532.18
Operational costs				
Administration materials	9,241.98	8,543.65	17,190.59	11,953.9
Assistants'				

salaries	0	0	0	0
Maintenance	10,394.3	12,043.33	11,083.39	6,256.26
Vehicle and plant costs	12,333.5	14,613.83	16,727.2	11,231.0
Power	10,985.8	9,211.23	11,433.43	4,059.7
Water	0	0	0	0
Telephone	0	800.0	900.0	500.0
Other	26,555.43	37,314.07	22,331.03	9,780.44
Sub-total operational costs	69,858.31	183,742.88	299,459.94	125,313.48
Total expenditures	178,858.31	183,742.88	299,459.94	206,845.66

The Salamo School appears to run at minimal cost. In two of the four years recorded it spent less money than it received. While it spent no money on library resource it spent considerably more than some of the other schools on teaching aids and resources. One possible explanation is that costs of photocopying the students' LRBs are entered in different places by the various schools which make direct comparisons across schools somewhat risky.

Table 44 Salamo cost per unit

Year	Total student number	Total cost kina	Cost per unit kina
2009	42	183,742	4,258
2010	47	183,742	3,909
2011	50	299,459	5,989
2012	50	206,895	4,137

Table 45 Tinsley total budget by source of income

Years	NDoH salaries	NDoH	School agency	Donors	Tuition fees	Others	Total
2009	42,345.42	153,500	6,300	0	31,300	3,444	236,890.42
2010	43,468.1	90,000	0	0	88,200	3,200	224,868.1
2011	43,468.1	90,000	0	0	92,000	3,375	228,843.1
2012	43,468.1	90,000	0	0	112,500	2,500	248,468.1

One noticeable factor related to Tinsley income is that in 2012 the school agency gave funds to the school. It has also received funds from other agencies including the local PHO.

Table 46 Tinsley total expenditure by category

Expenditure	2009	2010	2011	2012
Salaries	42,345.42	44,668.1	47,468.1	43,468.1
Teaching costs				

Teaching aids and materials	1,500	2,600	3,200	5,700
Student food and accommodation	70,000	80,500	90,500	120,000
Student travel and books	17,010	35,342	41,032	20,516
IT (computing and internet)	6,000	3,000	1,900	3,610
Uniforms	8,000	0	10,500	0
Library	7,000	0	0	0
Other	5,000	0	0	0
Sub-total teaching costs	156,854.92	166,610.1	190,600.1	193,294.1
Operational costs				
Administration materials	500	700	900	1000
Assistants' salaries	13,520	13,520	16,120.6	16,120.6
Maintenance	8,000	8,500	8,900	1,500
Vehicle and plant costs	7,000	7,000	12,000	3,000
Power	1,000	0	0	0
Water	0	0	0	0
Telephone	0	0	0	0
Other	0	0	0	0
Sub-total operational costs	29,000.2	29,720	37,920.6	21,620.6
Total expenditures	186,875.42	196,330.1	228,520.7	214,914.7

Although some of the schools have not been financially supported by the school agency some have been supported in kind. For example, power for running the Tinsley School is from the hospital generator so it pays very little. St Margaret's also gets its power without cost sharing with the church agency.

Table 47 Tinsley cost per unit

Year	Total student number	Total cost kina	Cost per unit kina
2009	21	196,875.42	8,895.97
2010	49	196,330.1	4,006.74
2011	46	228,520.7	4,967.84
2012	45	214,914.7	4,775.9

Again a relationship is seen between student number and cost per unit. This relationship is a positive factor when considering increase in student numbers but should not be pursued at the cost of quality.

It is important that each of the schools audited had spent some money on school maintenance across the four years data were collected.

Costs per unit varied considerably across the eleven CHW schools. Kapuna appears to have the lowest cost per unit with Kumin and Runginae being higher than the others. Costs per unit across the four years for which data were collected appeared to vary the least at Braun whereas for the other schools the costs per unit appear to have at least doubled over the time period for which data were collected.

5. Standards for education programs

The tool used for collecting data of the standards related to the education program of CHW students was developed from the Standards for Education Programs, National Framework for the Accreditation, Monitoring and Evaluation (2005). The document used was prepared for nursing and midwifery courses by the Nursing Council of Papua New Guinea (2005) but was used for review of the Community Health Worker Schools Audit after a document specifically for CHWs was unable to be located. The audit team was reassured that the CHW document was the same as for the nursing courses.

As for the Standards for Education Programs, National Framework for the Accreditation, Monitoring and Evaluation (2005) the audit tool was divided into six standards with questions related to each division of each standard. These questions were developed from the cues identified by the Standards CHW development group. Each of the six Standards in the Education Program audit tool is followed by Performance Criteria then by questions from the related performance cues. Possible responses prepared by the audit team and advisors were a Yes / No response or a response on a Likert scale with possible responses being selected from; Always, Usually, Sometimes, Rarely, or Not yet. Answers to either of these possible response types are given in percentages. Frequently there were comments made by the principal being interviewed and these statements inform the text included under the totalled response for each of the questions.

5.1 STANDARD 1

Development, implementation and evaluation of the education program occur in collaboration to ensure the program meets the needs of stakeholders.

Performance criterion 1

Details of discussions and agreements with stakeholders are documented

Q1 Are the minutes of meetings with stakeholders properly documented?

Always	Usually	Sometimes	Rarely	Not yet
63%	18 %	9%	0%	9%

It was usual for staff to meet within the context of the school boards. The representative at the meetings of the respective boards depended on the governing structures of the school but usually included clinicians as well as school staff. When held, the meetings were seen as important sharing opportunities between the school and its related stakeholders. Students were not members of any of the school boards. While it was usual for the staff at Tinsley to hold board meetings these had not occurred recently because of the risks to clinicians travelling to attend the meetings. If meetings are not regularly held the most likely reason given was lack of school funds to organise transport for participants as well as per diems.

Q2 If yes, does the minutes of these meetings with stakeholders' record discussions and agreement?

Always	Usually	Sometimes	Rarely	Not yet
63%	18 %	0%	0%	9%

Sometimes the records are held at the school and sometimes with the affiliated church agency. Sometimes the discussions are not recorded.

Q3 Is support from clinical facilities provided?

Always	Usually	Sometimes	Rarely	Not yet
63%	18%	9%	9%	0%

While generally seen as important, clinicians were not always present at the school meetings. The biggest impediment to their representation was funding. Another reason for non-attendance at the meetings was given as lack of need. It was argued that now that the clinicians know about the 'new' curriculum they do not need to come to the school/board meetings. In one instance, the only time clinicians came to the meetings was when their signatures were being recorded for the ongoing purpose of signing students' clinical assessments.

Q 4 Is this support documented?

Always	Usually	Sometimes	Rarely	Not yet
63%	9 %	9%	9%	9%

Minutes of the meetings when held, and if recorded, are in the documents of the school board.

Performance criterion 2

Relevant cultural issues are discussed with stakeholders

Q 5 Do the minutes of the meeting demonstrate that cultural issues have been discussed with the appropriate stakeholders? Eg. Women, elders etc.

Always	Usually	Sometimes	Rarely	Not yet
36%	18 %	18%	9%	0%

9% No comment

Wide differences in responses to this question were received. Where cultural matters are being discussed it appeared more likely that these discussions would be held prior to students going out on clinical placements and in one instance have taken place only once, that is prior to the first students in the 'new' curriculum going out on clinical placements.

Q 6 Are these cultural issues evident in the education program?

Always	Usually	Sometimes	Rarely	Not yet
63%	18 %	9%	9%	0%

Matters related to culture have been included in the 'new' curriculum. As these matters are more particularly included in the environmental health modules they are likely to be discussed at this point.

Performance criterion 3

Evaluation is focused on program outcomes and occurs in collaboration with stakeholders

Q 7 Are the following stakeholders given the opportunity to evaluate the program at least once a year?

	Always	Usually	Sometimes	Rarely	Not yet
Staff from clinical facilities	36%	27%	18%	0%	18%
Students	27%	18%	18%	18%	18%
Health service administrators	54%	0%	9%	9%	18%
Other stakeholders	36%	9%	27%	9%	18%

Questions related to evaluation of the teaching/learning program prompted a wide range of responses. Students evaluated each of the curriculum modules when that module is completed using the appraisal form included in the LGs and FGs but are not seen to evaluate teachers as such. Consumers of health services may give informal evaluation following care by students during a clinical placement. Lack of understanding was given by one respondent as a reason why the program was not evaluated by stakeholders.

Q 8 Does internal evaluation occur at least once a year?

Yes 73%

No 27%

Students evaluate each of the modules at their completion and staff may evaluate the modules informally at staff meetings. However, not all schools hold regular staff meetings. One reason for lack of internal evaluation was that there were no existing tools for internal evaluation. Internal evaluation does not appear too well understood with a need existing for teaching staff members to be more informed as to the purposes, processes and benefits of evaluation.

Recommendation 14

Internal evaluation of program outcomes essential for continued quality improvement are more likely to occur if the teaching staff are offered a workshop related to the purposes, processes and benefits of evaluation. Such a workshop is recommended and could be incorporated within a workshop related more generally to teaching methods

Q 9 Does external evaluation occur yearly?

Yes 18%

No 82%

If evaluation does not occur yearly how often is the program evaluated?

This question prompted some heated responses. The 'new' curriculum was implemented over a period of years with the first schools, Lemakot and Runginae commencing the curriculum in 2008. While the curriculum was in the process of being implemented these schools were visited by the NDoH but feedback was not received nor have the schools been visited since. This year Raihu did not admit a new cohort of students and asked the Medical Board (MB) to come and evaluate the school. The MB has come but no formal evaluation has been received. Lack of external evaluation has been interpreted by the schools as lack of interest by either the NDoH or the MB. An obvious need related to ongoing improvement of the teaching/learning of CHW students is that of external evaluation. Without such evaluation the staff members in CHW schools have no external recommendations for and guidance in mechanisms for improvement.

Recommendation 15

Regular external evaluations of each of the CHW schools are implemented by the MB and NDoH with formal recommendations made for improvements in practice. These evaluations should be made at a pre-determined time and sequence and completed annually or bi-annually. Without external evaluations the quality of the teaching programs of the schools is likely to remain at existing levels and the necessary precursor of quality improvement prior to an increase in student numbers will not be achieved

Q 10 Are there evaluation tools designed to measure program outcomes?

Yes 36%

No 63%

If not, what other evaluation measures are undertaken?

The existing evaluation tools are limited to the module evaluation forms included in each LG for students' evaluations at the end of each module although an occasional separate evaluation is made by teaching staff. The students Evidence Portfolio, CSB and ARB were considered as an evaluation mechanism by the Rumginae school. There is no overall course evaluation tool or evaluation made.

Performance criterion 4

Policies are developed and implemented that demonstrate the process of evaluation

Q 11 Does the developed policy identify the method of collaboration to be used by the educational institution?

Yes 82%

No 18%

The majority of respondents stated no policy existed. Kumin CHW School had a developed policy that was included in the Student Handbook, Salamo had a draft of a policy but had no mechanisms for consultation regarding the efficacy of its proposed policy and St Margaret's stated its cumulative assessment of students' results at the end of each academic year was regarded as assessment policy.

Q 12 Is the admission policy for the educational institution inclusive? (eg No discrimination due to gender/family/location/marital status/age)

Yes 100%

No 0%

Each of the schools had developed specific admission criteria. Although there were minor variations each of the schools had similar requirements some of which have been mandated in the CHW Certificate Program (Part 1), 2001, document. Details of admission criteria can be seen on page x of this report.

Q 13 Does the admission policy take into account the needs of stakeholders?

Yes 100%

No 0%

The most common stakeholder need to be included in the admission criteria was the distribution of places according to the needs of the provinces of PNG with students from remote areas being considered more carefully.

5.2 STANDARD 2

The assessment process of the education program demonstrates that the graduate has achieved the National Competency Standards

Performance criterion 1

Policies are developed and implemented that clearly identify assessment methodologies used in the education program

Q 14 Do assessments test whether students have achieved unit/program objectives?

Always	Usually	Sometimes	Rarely	Not yet
73%	9 %	9%	0%	0%
No Comment 9%				

All respondents agreed that module assessments were related to the stated module objectives and had been developed by the original team writing the 'new' curriculum.

Q 15 Is the assessment load appropriate to the module timeframe?

Always	Usually	Sometimes	Rarely	Not yet
9%	0 %	27%	18%	36%
No Comment 9%				

There are variations in module assessment loads that are related to the module lengths. That is longer modules have more assessment pieces than shorter modules. Assessments were generally considered to be appropriate to module length.

Q 16 Is the assessment load consistent with similar academic programs?

Always	Usually	Sometimes	Rarely	Not yet
63%	18 %	18%	0%	0%

Staff could not state with certainty if the assessment load taken by the CHW students was more or less than students in other certificate courses but thought the CHW students were likely to be more heavily assessed.

Q 17 Is the frequency and timing of the assessments reflective of the nature of the program and its progression?

Always	Usually	Sometimes	Rarely	Not yet
63%	18 %	18%	0%	0%

There was general agreement that the frequency and timing of assessments reflected the nature of the program. However, staff at Salamo stated that factors beyond their control could influence the timing of assessments. For example the photocopier may have broken down or run out of ink so papers could not be prepared for the students until repairs had been made. Gaubin stated that the assessment timeline may not be able to keep up with the curriculum timeframe referring in particular to the clinical assessments of students. When assessments are not completed by students within the two-year timeframe students' time at the school can be extended until the student has completed their required assessments and are able to graduate. Extensions in time have been used by the CHW schools as a mechanism for adjusting to the learning needs of different students. For example, slower learners require longer to attain competency than quick learners but all need to achieve competency before completing their program of study and maintain the quality of graduates from the CHW schools. Schools bear the additional costs of retaining a student until he / she has developed competency in the required clinical skills.

Q 18 Are assessment procedures developed on the basis of collaboration between the following?

	Always	Usually	Sometimes	Rarely	Not yet
Education providers	73%	18%	9%	0%	0%
Consumers	27%	27%	27%	0%	18%
Clinical staff	63%	18%	18%	0%	0%

There was widespread agreement that assessment procedures had been developed by the writers of the 'new' curriculum. There was far less agreement on whether or not consumers had been consulted by the curriculum development team about student assessment procedures. Clinicians were more likely to have been consulted.

Performance criterion 2

Policy is developed that reflects the diversity of student profiles

Q 19 Does monitoring and support of students take into account the following?

	Always	Usually	Sometimes	Rarely	Not yet
Gender	45%	9%	18%	0%	27%
Marital status	27%	0%	9%	0%	63%
Cultural background	36%	9%	0%	0%	54x%

There was widespread variation in responses to this question. An underlying principle that all students should be assessed equally appeared to override any need to allow for variations in

gender, marital status or culture. However, cultural variations were considered to influence monitoring of students particularly if the students came from a remote area where educational disadvantage was probable. The other major variable that influenced the monitoring and support of students was the respective learning styles of students with quick learners and slow learners being monitored and supported somewhat differently.

Performance criterion 3

Policy is developed that clearly identifies how validity and reliability in assessments will be achieved

Q 20 Are a variety of methods used in assessing students?

Always	Usually	Sometimes	Rarely	Not yet
100%	0 %	0%	0%	0%

Within each of the Learners Guides and Facilitators Guides are assessments that students take. Assessments are directly related to the module content which strengthens validity and answers are provided in the tutors' Facilitators Guide. As the same tests are used across time and tutors for a specific module, and answers provided for marking, the probability of test retest and for inter-rater reliability is increased. Teachers are free to add additional assessment pieces if they consider that the students' learning is not being adequately assessed. Not all schools make additional assessment of the students nor are additional assessment pieces added to each of the specific module assessments. Assessments taken include written assignments such as case studies, short answer written tests, for example, the end-of-module assessment, oral presentations, and skills demonstration.

All assessment pieces undertaken are recorded in the Assessment Record book (ARB). At the completion of each module, the module tutor is responsible for recording each assessment piece in the ARB. Audit of the various schools' ARBs show there can be considerable time-lag in students taking an assessment piece and it being recorded in the ARB. At one school it was found that students well into their second year of study had no assessment pieces recorded in their ARB. Such a delay is unacceptable particularly in an environment where staff members are leaving the employment of a school because of a range of factors including profound dissatisfaction with pay rates. Two schools with the poorest record of student assessment records are Gaubin and Salamo. Some schools had exemplary records of student assessment pieces and these schools, Kumin, Lemakot and Raihu are to be commended for their consistent care in recording assessment pieces and results.

When asked about their non-recording of results, tutors claimed excessive workloads. Each of the schools with poor records of student assessments, Gaubin and Salamo, come within the required tutor student ratio of 1:10. It should also be noted that the schools that are doing well, Kumin, Lemakot and Raihu have tutor to student ratios that are not more advantageous than the schools doing poorly.

Students take their Skills Logbook (SLB) with them to their clinical placements and are to initiate skill assessment when they feel ready for assessment. Each of the clinical skills to be assessed is related

to a specific module and its associated clinical practice experience. In practice, the relationship of clinical skills assessments and the clinical practicum times suggests there are specified times when each of the clinical skills should be attempted and recorded in the ARB and SLB. It appears that poor time management contributes markedly to the delays in entering results of students' assessments in the appropriate record books.

Recommendation 16

Tutors staffing the CHWs and workplace assessors are offered a workshop that includes time management processes. This workshop should use the tools included in assessing students as exemplars for the appropriate pathways and timelines for entering all assessment results.

Q 21 Is a student's progress determined by examination of the cumulative assessment?

Yes 100%

No 0%

Each of the CHW students has an Evidence Portfolio. This document holds all assessment pieces completed by the students and marked by the tutors. The Evidence Portfolio is used to track students' progress and is a cumulative record of each student's assessment. At the completion of the course the Evidence Portfolio can be submitted to the Medical Board as the evidence of successful course completion and thus evidence for granting a CHW practitioner licence. The Evidence Portfolio is thus a crucial document that contains a cumulative record of each student's progress.

At each of the schools audited the audit team asked to see a sample of the Evidence Portfolios of their students. Like the SLB and ARB the Evidence Portfolio showed considerable variation in the care taken by a school in keeping the Evidence Portfolio up to date with all completed student assessment being filed. Schools where the Evidence Portfolio was not well kept include Gaubin and Salamo. There appeared to be no real reason for staff not filing the assessment pieces and keeping the Evidence Portfolio up to date except once again the reason for staff being overworked was given. The need for improving time management skills is again obvious when some schools keep their records very well with the same tutor student ratios. Inaccurate and untimely maintenance of Evidence Portfolios also has the possibility of impacting on the final external audit of student records by the Medical Board and thus unnecessarily delaying registration of CHWs for practice.

Recommendation 17

Information included for tutors attending the CHW time management workshop includes the processes of maintain up to date Evidence Portfolios

Q 22 Is documented evidence available to show that all staff utilizing clinical assessment tools have been instructed in their use?

Always	Usually	Sometimes	Rarely	Not yet
73%	18 %	9%	0%	0%

Preparation of clinical staff in the use of clinical assessment tools is carefully undertaken when this is completed. Schools give financial reasons and lack of staff time when it is not completed. Schools carry the financial responsibility for this preparation which can limit the number clinicians able to assess students. Signatures of appropriately prepared clinicians are submitted to the MB which is then able to verify the signatories of assessments in the Evidence Portfolios of students against the submitted lists.

Performance criterion 4

Policy is developed for review of all assessment decisions

Q 23 Are procedures for appeal processes available?

Yes 100%

No 0%

Students in each of the CHW schools had access to appeal processes often through the academic board. A common practice is for students to first approach the module teacher then the Implementing Coordinator and then perhaps the Education Committee.

Q 24 Is documented evidence available to demonstrate how students are informed about their appeal rights and the appeal process?

Yes 82%

No 18%

Appeal processes were usually included in either the Students Handbook given to students on enrolment, or in the draft copy as for Salamo, or in their orientation program. Gaubin, Lemakot, Rumginae require students to sign having seen the appeal process and signatures are filed in school records.

Q 25 Are support staffs available for students in appeal processes?

Yes 54%

No 45%

If support staffs are available to students these support persons may be a school chaplain, counsellor or clerical staff. At Onamuga each student is allocated to a specific school counsellor on enrolment and will approach her/his particular counsellor when a need arises. Support staffs are not available in all schools.

Q 26 Is documented evidence available detailing the process for finalising students grading?

Yes 100%

No 0%

Each of the CHW schools stated that documented evidence was available that detailed processes for finalising student grades. A comprehensive transcript was available at the end of the first year for each student enrolled at Tinsley and for Gaubin, Kumin and Lemakot where the evidence was held by the Implementing Coordinator. At Onamuga the Curriculum Coordinator held the records.

Q 27 Is documented evidence available detailing the appointment of an external examiner?

Yes 36%

No 63%

External examiners were not widely used although external members may attend a moderation committee such as that at Rumginae or Lemakot. The process of examining randomly selected students' Evidence Portfolios by the Medical Board at the completion of studies can also be considered external examination but appointment of the examining person is outside the powers of the CHW schools.

5.3 STANDARD 3

The current ethics and code of professional conduct form the basis of the educational program

Performance criterion 1

The current ethics and code of professional conduct form the basis of the educational program

Q 28 Is the Code of Professional Conduct for all health workers in PNG included in the teaching of the education program?

Always	Usually	Sometimes	Rarely	Not yet
100%	0 %	0%	0%	0%

All school representatives stated that the Code of Professional Conduct is included in the curriculum as the prepared and required curriculum addresses the Code required for professional practice.

Q 29 Are students taught clinical care based on the current Standard Treatment Books?

Always	Usually	Sometimes	Rarely	Not yet
54%	0 %	18%	0%	27%

Each school representative recognised that Standard Treatment Books were used as guidance for care. However, the Standard Treatment Books used are usually the 2003 editions. The 2010 obstetrics standards are usually seen by students in the clinical areas. Clinical staff members are asked to come to the schools to present the most recent information related to current standard practices, particularly when the school does not hold the current Standard Treatment book. Such a practice often requires additional expenditure by the CHW School particularly when clinicians are brought to the school from distant clinical areas.

Q 30 Does the curriculum describe the full program of studies and their relationship to each other?

Yes	100%
No	0%

A comprehensive document that gave sequence of modules, times for presentation and their relationship to each other was prepared prior to the implementation of the 'new' curriculum. While these times and sequences are suggested staff members are able to vary the sequence of modules. Related periods of clinical practice are also given in the prepared curriculum document.

In the open ended questions included at the end of this chapter of the report is more detailed discussion about changes to modules and their sequencing.

Performance criterion 2

The objectives (learning outcomes) of the modules in the education program are directed towards the students achieving national competency standards

Q 31 Does each module of the program demonstrate how the module will assist the student in developing competence to meet the national competency standards?

Always	Usually	Sometimes	Rarely	Not yet
91%	9 %	0%	0%	0%

The relationship between module content and the achievement of national competency standards are written into each of the modules.

Q 32 Does each module identify the relationship of the module objectives to specific national competency standards?

Always	Usually	Sometimes	Rarely	Not yet
91%	9 %	0%	0%	0%

Relationships between learning objectives and national competency standards have been written into the 'new' curriculum.

Performance criterion 3

Both formative and summative assessment of students is based on the national competency standards

Q 33 Are all theory examinations based on the module objectives (learning outcomes)?

Always	Usually	Sometimes	Rarely	Not yet
91%	9 %	0%	0%	0%

At the end of each of the modules is a written assessment (theory examination) initially prepared by the curriculum writers and closely related to modules objectives. This test is included in the Facilitators Guide along with the correct answer to each of the questions. Staff members are free to prepare additional theoretical assessments if they choose to add to the assessment load of students in order to more completely assess mastery of the learning objectives.

Q 34 Are all clinical assessment tools based on the national competency standards?

Always	Usually	Sometimes	Rarely	Not yet
100%	0%	0%	0%	0%

As with the theoretical assessments, the clinical assessment tools have been prepared during the processes of curriculum preparation. Every student has a copy of the Skills Logbook that contains each of the clinical assessments to be undertaken during her/his course.

Performance criterion 4

Evidence demonstrates that the assessors of students' clinical competence have undergone education about the national competency standards

Q 35 Have all teaching and clinical staff members undergone education in the function of the national competency standards?

Always	Usually	Sometimes	Rarely	Not yet
27%	36%	27%	0%	9%

There is a wide spread of responses to this question. While teaching staff were generally informed about the national competency standards there was much less certainty about clinical staff. The CHW teaching staff members were unclear about their responsibilities in teaching clinical staff about national competency standards. Although Rumginae and Lemakot were certain all teaching and clinical staff had undergone this education, the CHW teaching staff described regular changes in clinical personnel and the heavy burden schools would have if they were solely responsible for education of clinical staff. Tinsley was preparing to institute an annual session for all staff on national competency standards but there was concern about the impact on teaching staff as well as concern about related financial impacts of such sessions on the schools' tight budgets. A need exists for the clarification of line of responsibility in relation to education on national competency standards for clinical staff and for funding such education.

Recommendation 18
Clarification of respective responsibilities for education of clinical staff in relation to national competency standards is obtained. Should the CHW schools be seen to carry this responsibility then additional funding is provided to the schools

Q 36 Are the national competency standards applied in the teaching of the program?

Always	Usually	Sometimes	Rarely	Not yet
82%	9 %	90%	0%	0%

National competency standards were generally considered to be evident in the prepared teaching materials of the 'new' curriculum

Q 37 Are the national competency standards applied in the assessment of the program?

Always	Usually	Sometimes	Rarely	Not yet
73%	18 %	0%	0%	9%

There were two interpretations of this question. One related to the assessment of students and it was accepted that the standards were an integral component of student assessment. The second interpretation was an assessment of the curriculum itself. If the latter interpretation was chosen the response was that the curriculum had not yet been assessed.

5.4 STANDARD 4

Quality management process are documented, implemented and evaluated regularly to maintain educational standards

Performance criterion 1

The education program has sufficient evaluation processes in place to ensure the quality of the program

Q 38 Are the following mechanisms used in the evaluation process?

	Always	Usually	Sometimes	Rarely	Not yet
Student evaluation of teaching and learning	63%	27%	0%	0%	9%
Peer evaluation of teaching and learning	18%	36%	27%	0%	18%
Performance development systems for staff	36%	27%	27%	9%	0%
Evaluation by clinical staff	27%	18%	0%	9%	45%

Various responses were given to this question. Students were seen to evaluate learning through the module evaluations included at the end of each module but did not directly evaluate teaching. Staff did not generally evaluate each other's teaching nor were performance development systems for staff widely used. The evaluation of clinical staff was not generally considered to be the responsibility of a CHW school and their feedback on the performance of the CHW system was not formally sought. At times it may be given informally when teaching staff were in the clinical environment with students.

Performance criterion 2

The national competency standards are linked and integrated into the curriculum

Q 39 Are all modules linked to the national competency standards?

Always	Usually	Sometimes	Rarely	Not yet
91%	9 %	0%	0%	0%

Each of the modules of the curriculum was seen to be linked to national competency standards. Links were considered to be more evident in the modules where the topics were related to disease processes

Q 40 Are all module objectives (learning outcomes) linked to the national competency standards?

Always	Usually	Sometimes	Rarely	Not yet
91%	9 %	0%	0%	0%

During the processes of curriculum development clear links between learning outcomes and national competency standards have been made.

Performance criterion 3

The results of evaluation processes are incorporated into the program

Q 41 Do documented procedures exist that ensure the results of evaluations are utilised to improve quality?

Always	Usually	Sometimes	Rarely	Not yet
36%	27%	0%	18%	18%

A wide spread of responses were obtained from this question. St Margaret’s and Braun considered that no evaluations were made so no feedback loop existed. Tinsley suggested that there had been evaluation in 2005. Where evaluations were considered to have been made these results were held by the Curriculum Coordinator. Two possible reasons for this divergence of opinions are that procedures do not exist and if they do the feedback loop to curriculum improvement is lacking. Where staff have formal teaching qualifications the link between curriculum evaluation and improvement are more likely and is a need related to quality improvement of the CHW teaching / learning system.

Recommendation 19

Teaching staff in the CHW schools are updated on the quality improvement methods inherent in course evaluation and change implementation. The importance of quality improvement is not well understood by staff who do not hold a teaching qualification and those who do would benefit from refreshers on updated evaluation methods

Q 42 Are results of evaluations documented and available?

Always	Usually	Sometimes	Rarely	Not yet
63%	9%	9%	0%	18%

If the course had been evaluated the records of the evaluation were kept in course documents usually with the Curriculum Coordinator

Performance criterion 4

Q 43 Does the educational institution have documented policy/policies on quality improvement processes?

Yes 45%

No 5%

Schools were seen to have a range of policies including management, finance and human resource management but quality improvement policies were not found in many of the schools. Linked with the need to evaluate teaching and learning is overall quality improvement. Staff may see matters that need improving but the routes to improvement may not be established or the skills of staff number or ability may not be adequate to bring quality improvement projects to fruition. The recommendation linked to Q 41 would be strengthened by broadening understanding on quality improvement to include overall improvement. These improvements become more significant given the intention of the NDoH to improve quality prior to increasing student numbers.

Recommendation 20

Any workshop planned for addressing quality matters related to course evaluation and change implementation should be broadened to include wider matters related to quality improvement including policy development and implementation

Q 44 Are the minutes of quality improvement activities documented and available?

Always	Usually	Sometimes	Rarely	Not yet
45%	0%	9%	0%	27%

No Comment 18%

If quality improvement activities are undertaken they are usually documented.

Q 45 Are adequate time and resources devoted to quality improvements?

Always	Usually	Sometimes	Rarely	Not yet
18%	0%	45%	9%	27%

Two distinct difficulties were highlighted by this question. The first is that teaching staff already carry a heavy workload and do not find time to devote to quality improvement and the second was that the scant resources of the CHW schools do not easily expand to include quality improvement activities. Rumginae had allocated some funds obtained from a donor for quality improvement.

Q 46 Are human resource management policies in place in the following areas?

	Always	Usually	Sometimes	Rarely	Not yet
Conflict of interest	45%	0%	0%	0%	54%
Staff selection	63%	18%	9%	0%	9%
Minimum qualifications	82%	9x%	9%	0%	0%

Conflict of interest was not generally included in human resource management policies. More guidance was available for staff selection including minimum qualifications from the CHW Certificate Program (Part 1), 2001 document.

Q 47 Are physical and financial resource policies in place that ensure effective use of teaching and learning resources?

Yes 82%

No 18%

Physical and financial resources were being used as effectively as the CHW management systems allowed. Salamo commented though that as there was no one able to develop such policies they did not exist and therefore could not be implemented.

5.5 STANDARD 5

The curriculum provides learning experiences necessary for students to achieve the national competency standards

Performance criterion 1

The curriculum demonstrates a holistic approach to health care

Q 48 Do the theoretical foundations include the following aspects of health and culture?

	Always	Usually	Sometimes	Rarely	Not yet
Physical	73%	9%	18%	0%	0%
Mental	82%	18%	0%	0%	0%
Spiritual	82%	9%	9%	0%	0%
Social	45%	27%	27%	0%	0%

Responses to this question were somewhat surprising. Seven of the schools considered that physical foundations of health and culture were evident in the curriculum but more considered that mental and spiritual aspects were evident. Social aspects of health were the least considered.

Performance criterion 2

The curriculum reflects the national policies and health priorities of PNG

Q 49 Are the following incorporated in the curriculum?

	Yes	No
National Health Plan 2011-2020	36%	63%
Medium Term Development Framework	36%	63%

The question related to the National Health Plan 2011-2020 prompted discussion of overall resources and the age of the present curriculum. Given that this curriculum was developed over the time period ending in 2004, and that the resources were chosen by 2006, there are no documents that are newer than those available in 2006 including the National Health Plan 2001-2010. If staff have been able to obtain a copy of the current National Health Plan and the Medium Term Development Framework these are used but if not the older documents are used bringing their date to student attention.

Performance criterion 3

The curriculum demonstrates that the theoretical and practical components of the course are adequate to achieve the outcomes and are integrated throughout the program

Q 50 Does the curriculum meet the determined minimum number of theoretical and clinical hours as set by the NDoH?

Yes 73%

No 27%

The current curriculum contains 1595 theoretical hours and 1645 practical hours. Most schools met the required number of hours but when external events such as tribal fighting impact on the school, for example at Tinsley and at Onamuga, the overall number of hours may not be met. Cost containment may also require students are sent home early at the end of the year as has happened at Braun. Respondents at Braun and St Margaret’s stated that the amount of content required by the curriculum meant that the teaching hours set down in the curriculum were inadequate and that staff came in to teach at the weekend in order to cover all the required material. Staff across the schools commented that the required content exceeded what would be logically included in a course at certificate level. An argument is building across a range of responses in relation to curriculum content and sequencing as well as curriculum resources and currency that identify need and support a wide ranging curriculum review.

Recommendation 21

A wide ranging review of the existing ‘new’ curriculum is strongly recommended. Preparation of the current curriculum was completed in 2004 with resources by 2006. Given that the curriculum is now being audited and that a significant number of matters related to its age and content have been identified quality improvement can only be assured prior to increasing student numbers if the current curriculum is reviewed and refreshed

Q 51 Is content taught in a logical manner that links theory to practice?

Always	Usually	Sometimes	Rarely	Not yet
82%	0%	18%	0%	0%

The links between theory and practice were generally seen as logically presented through the 'new' curriculum. However, some changes have been made in sequencing. It was suggested that the sequencing of topics could not be clearly understood until the curriculum had been implemented and that now staff were in a better position to comment on curricula logic and sequence. These matters will be discussed more fully in the open ended questions at the end of this chapter.

Performance criterion 4

The curriculum reflects current developments in health care practices and education

Q 52 Is the curriculum based on theory and practice that is evidence based?

Always	Usually	Sometimes	Rarely	Not yet
18%	9%	63%	9%	0%

No Comment 9%

Responses to this question highlighted the need for curriculum review. While there is some evidence of practice included in the curriculum resources these are limited to those that had been published prior to the release of the 'new' curriculum. A number of strategies are being used to obtain more current evidence including asking clinical staff for practice updates and attempting to obtain more current evidence. The latter is a problem as not only are the evidences difficult to obtain but staff often do not have the knowledge to appraise that evidence and may use poorly prepared and unreliable resources. Once again the need to update the curriculum is emphasised by these problems.

Q 53 Is the delivery method of the program reflective of current educational theory?

Always	Usually	Sometimes	Rarely	Not yet
45%	18 %	27%	9%	0%

Observation of classes in action showed that a range of teaching methods were being used by the CHW teaching staff. These included a traditional approach that focused on the teacher as well as student centred group activities. The FGs of the curriculum provide teachers with alternate approaches to a teacher centred approach and are being used in the schools.

Performance criterion 5

Evidence demonstrates that the students have gained appropriate knowledge and skills to meet community requirements and the National Competency Standards

Q 54 Are the assessment methods in the program adequate to test the following?

	Always	Usually	Sometimes	Rarely	Not yet
Students' theoretical knowledge	63%	18%	9%	9%	0%
Students' clinical skills	63%	36%	0%	0%	0%

Teaching staff appeared more certain that clinical skills were being adequately tested than were theoretical knowledges. Clinical skills assessments could more easily be adapted to the needs of different students as they strived for competency. There were frequent comments about lengthening the overall course to be certain that students had achieved competency for each of the assessed skills.

Q 55 Are the clinical assessments included in the program adequate to ensure the student has demonstrated the national competency standards?

Always	Usually	Sometimes	Rarely	Not yet
45%	36%	18%	0%	0%

Where there was doubt related to ensuring that students demonstrated the national competency standards this was corrected by staff in some of the schools developing additional assessments. Staff in the clinical facilities who did not understand the national competency standards were also seen as a barrier to students demonstrating appropriate standards of practice.

5.6 STANDARD 6

Educational institutions must have sufficient resources so that learners can achieve the national competency standards.

Performance criterion 1

Adequate numbers of appropriately qualified and experienced health professionals staff the educational institution

Q 56 Does the teaching staff of the educational institution have appropriate qualifications and experience for the job?

Always	Usually	Sometimes	Rarely	Not yet
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36%

63 %

0%

0%

0%

The biggest barrier to all staff holding appropriate qualifications was staff holding, or not holding, a teaching qualification. Table 12, p.28, describes which institutions have yet to employ only persons holding such a qualification. Some reasons given for employing teachers without a teaching qualification were that it was increasingly difficult to attract staff into a position where they would be paid casual rates and that once a staff member had obtained a teaching qualification he/she left for a better paying position. Braun had one staff member studying in New Zealand this year and planned to send another staff member next year to earn a teaching qualification. Braun had one staff member a year taking a teaching qualification. Salamo and Gaubin had no funding to support ongoing study of their staff members. Kumin differentiated between staff holding a teaching qualification or another specialist qualification such as midwifery. Rumginae required its staff to either hold a teaching qualification or have three years specialist experience in a field of care.

Q 58 Does the organisational structure show the reporting and supervisory relationship of staff?

Yes 91%

No 9%

Most schools were able to show an organisational structure that identified reporting pathways for their staff members.

Q 59 Are teaching staff encourages and supported to undertake research and other scholarly activities?

Yes 27%

No 73%

Little additional scholarly activity was undertaken apart from the preparation of classes. No staff members were directly involved in research.

Performance criterion 2

The educational institution has adequate physical resources to implement the curriculum

Q 60 Are library resources adequate and current, ie 5 years or less since publication?

Yes 0%

No 100%

No school claimed adequate library resources. When the expenditure figures are examined however, it can be seen that only Lemakot, Rumginae and Tinsley had spent any money on library resources in the years 2009-2012. Visiting the school libraries was an instructive experience. Libraries at Gaubin, Kumin and Rumginae included books that were logically catalogued and well presented. An odd phenomenon was observed in the Tinsley library where the plentiful supply of books was skewed by multiple copies of particular texts. For example, 150+ copies of Child Health

(1999 or 2000) were seen, 80+ copies of the WHO 1992 publication 'On Being in Charge' was also seen as well as 60+ copies of the Smith (1996) Health Care Manual for Community Health Workers. Each of these books is out-dated but the number of available copies means they are frequently used by students in both classroom and private study. Observation of classroom activities at St Margaret's showed students each accessing a copy of the Smith (1996) text during their class work.

At three of the schools where monies had been spent on library resources a small collection of more recent nursing texts were being used by the teaching staff. These texts may or may not be available to students depending on whether or not they were currently being used by staff and could only be used by students under supervision.

Cataloguing of books in the libraries was also seen as a difficulty. In most of the schools books had reference numbers but either a master catalogue did not exist or was not accessible. Students sometimes were able to borrow texts on a 'sign in-sign out' system but it was difficult to monitor who was holding a given book and schools experienced considerable losses through books not being returned to the library.

There is a list of required library resources in the curriculum implementation documents but CHW schools have not had funds to purchase these resources and the list is now out-dated. Revision of the curriculum should include review of the required library resources with monies provided to purchase the necessary texts in order to resource the CHW schools in a way that will contribute to quality improvement.

Recommendation 22

In the proposed review of the 'new' curriculum careful attention must be paid to renewing the library resources required for teaching/learning support. In addition to refreshing the library resources list CHW schools should be provided with the listed library resources

Q 61 Is there a sufficient supply of library resources?

Yes 0%

No 100%

No CHW school claimed sufficient library resources.

Q 62 Do library resources include a variety of appropriate materials including books and journals?

Yes 9%

No 91%

While there was a mix of materials in libraries none held current journals or subscribed to any journals.

Q 63 Are teaching aides available?

Yes 91%

No 9%

Teaching aids were generally available to staff for teaching purposes. In none of the schools was there a sufficient supply and in most cases the teaching resources were old. Manikins that were held by the schools were invariably old but still used for demonstration purposes.

Equipment used in demonstrating practical procedures was either inadequate or very old. When a school is based close to a hospital or health centre staff often borrowed equipment from that institution when demonstrating new procedures to students. Some hospitals were more willing than others to lend their equipment. Students were limited in the amount of practice in new procedures they had been taught prior to going out on clinical placements because of the limited equipment thus increasing the risk of error when performing a new skill on a patient in the clinical arena.

Q 64 Are teaching aides in adequate supply?

Yes 18%

No 82%

While teaching aids could be obtained provided an appropriate clinical facility was within the local area the supply of aids was inadequate. The matter of supply lack was acutely visible when students in a classroom situation were to practice a skill prior to entering the clinical environment. There was usually only one set of equipment and students needed to take turns using this equipment if they were to practice the skill. This meant that either students practiced without supervision and may be performing the procedure incorrectly or that the teaching staff needed to work with students when both students and teachers should have free time.

Q 65 Are audio-visual equipment available for teaching learning purposes?

Yes 36%

No 63%

Few of the schools had audio-visual equipment in working order. At Braun, Gaubin, Lemakot, Salamo and Tinsley there was either no overhead projector or it wasn't working. All the audio-visual equipment was stolen from Raihu when the school was broken into. Kumin had one old over-head

projector but it was still working while Onamuga, Rumginae and St Margaret's had a projector. Kumin, Onamuga and St Margaret's were the only facilities using power point and then it was generally run through a privately owned laptop computer.

Recommendation 23

Resourcing of CHW schools is a major problem. An alternate model to the current AusAID Scholarship Scheme could see monies being directly provided to the CHW schools. Instead of scholarships being allocated to individual students the same amount of money could be provided directly to the school for general supports of the student body. Monies to be used for texts by individual students would be better spent on purchasing resources to be used across the student body thus supplementing the existing scant resources used for libraries and teaching aids.

Q 66 Are classroom and other spaces for teaching/learning adequate to meet the requirements of the education program, eg private area for student feedback, clinical practice areas, and study spaces?

Yes 54%

No 45%

A wide range of classroom spaces were seen during the audit from excellent to very poor. These spaces are presented in greater detail in the infra-structure reports accompanying this document but at both St Margaret's and Kapuna there is only one classroom. At this point, however, it is sufficient to state that few CHW schools will be able to increase student numbers without a radical remake of classroom and teaching resources generally.

Q 67 Are accommodation and other facilities appropriate and adequate for the number of students?

Yes 27%

No 73%

Like classroom spaces dormitory accommodation is general woefully inadequate. Students are living in very poor conditions and unhealthily in most of the schools. More full descriptions and recommendations are found in the infrastructure reports.

Performance criterion 3

The educational institution has adequate financial resources to implement the curriculum

Q 68 Subject to HCAC approval, will the educational institution have sufficient funding for the duration of the course and for the number of students?

Yes 9%

No 91%

Only Kumin claimed it has enough funding at the moment. Each of the other schools is barely able to support its existing teaching program and will not be able to increase its student intake without a radical review of funding systems.

Additional open-ended questions

What needs to be improved in the curriculum modules?

The first matter related to the 'new' curriculum described by audit participants is that of the age of the curriculum. It is seen as out-dated and in desperate need of review. School staff stated that they were often the last to know of changes in practice being instituted by the NDoH and usually would get the current treatments from the clinical areas. Concern was also expressed about the amount of time given to modules in the curriculum with too much content being crammed into the available time. The comments of respondents related to improvement of the 'new' curriculum strongly support the previously stated recommendation for curriculum renewal.

Which information within the modules is out-dated?

Out-dated information was related to the management of TB, malaria including the current treatment of mosquito nets, typhoid, cholera, skin diseases, snake bite, respiratory problems, and HIVAids. Teaching staff obtained information on current practice from clinical colleagues. The National Health Plan in the curriculum is the previous one and teachers have great difficulty obtaining a copy of the current plan. Current childhood immunisation schedules are not in the curriculum.

What additional information needs to be added to the curriculum modules?

There is no module that deals directly with pharmacology. While there are drug therapies related to specific conditions included in the curriculum there is no module that includes information related to drug calculations, fluid management or IV calculation rates or teaches about different forms of measurement ie metric or imperial.

Life style diseases including diabetes and its complications do not receive much attention nor do matters related to teenage health issues or domestic violence. When teaching staff feel that the information within the curriculum is inadequate they provide additional material but this may be in classes that run at the weekend or in other supposedly free time.

The Health and Safety Act is not included

What information within the modules needs to be removed?

Respondents had more difficulty with answering questions related to what needs to be removed than those related to what needs to be added. The most common response was that less time should be given to community engagement and orientation to the role of the CHW. Health awareness and health education modules have repeated information that could be combined into one module. A need to integrate environmental health modules was expressed as was information contained in the nutritious food and safe handling modules.

Is the teaching/learning program achievable within the curriculum timeframe?

A dominant concept being expressed by respondents was that the students varied in the times required to achieve competency. Teachers appreciated the underlying philosophy of competency education but found that to assist students achieve competency required more time and staff worked weekends to assist students.

Often teachers expressed the idea of extending the overall time required for completion and suggested an additional 3 to 6 months to overall teaching/learning time for students. The difficulty of adding time to a certificate award and still fitting within the national qualifications framework was generally discussed in the context of adding additional time as was the complexities inherent in admitting a new cohort of students before the previous 2nd years had completed.

An option of shifting to a diploma program was also discussed but this would mean markedly increased demands from shifting to a three year course. It also meant increased demands on the limited school resources with three cohorts of students being at the schools at any one time.

What specific problems do you experience in the delivery of the curriculum?

Theoretical

The main difficulty expressed was related to the lack of resources. In the context of these discussion resources included teaching learning resources such as books and equipment as well as time.

Clinical placements

Matters related to the clinical placements of students will be discussed more fully in the next chapter. However, the main difficulties expressed were related to the clinical assessments of students, transport to clinical placements and accommodation while students were out on placements. It was not unusual for students to require additional time to meet the requirements of clinical placements. Extra time required to meet the number of births was the most commonly expressed.

What additional support do you need for effective delivery of the curriculum?

The acute shortage of resources was commonly expressed. When the 'new' curriculum was developed the LRBs were written with spaces throughout the books where students enter pieces of information found during research in class time, or in private study. The underlying intention appeared to be that each student would take away a complete set of LRBs, one for each module. Students are unable to do this however as the same LRBs are used by successive student groups with students needing to copy material from the LRBs into exercise books along with their answers to questions included in the original resource books. This practice is not only time consuming for the students but it also means that students are unable to acquire a professional library for themselves of the completed LRBs. The reason given by teaching staff of the CHWs for adopting this practice is that there are no new LRBs coming from the printers at NDoH, that the cost of photocopying sufficient LRBs themselves for each student is prohibitive, and that there are no monies in the CHW system to fund an ongoing supply of new LRBs for each student cohort.

Recommendation 24

If the AusAID Scholarship System is varied to an alternate model where monies are directed in whole to the CHW schools for dispersion across the student body, as recommended, monies allocated within this funding stream should be used for an annual print run of LRBs sufficient for each student to have their personal copy of each of the module LRBs and that they keep this LRB for future reference.

What changes has your institution made to the standard teaching/learning schedule?

Most of the changes made by the CHW schools are with the obstetrics/maternal and child care modules. Child health and obstetrics placements have also been integrated to enhance possibilities of meeting course requirements related to these modules. Some CHWs have shifted the obstetrics to the beginning of the second year as this has enhanced the possibility of students meeting the requirement of managing 10 births by the end of the academic year. Family planning, birth complications and postnatal care have also been presented to the students before this major clinical placement in order to more fully meet the practice needs of students.

In some cases health modules, ie health awareness and health education have been taught by a health extension officer. Other modules have been distributed across staff members. A First Aid officer has been sought to teach the First Aid module if at all possible.

Please comment on the balance between the proportions of theoretical/clinical learning in the curriculum.

The general distribution between 60% theory and 40% practice in the first year and 50% theory and 50% practice in the second is generally accepted. A few staff preferred the previous curriculum as it

contained longer times in the workplace and thus felt students' developed a greater level of clinical ability than in the current course.

What do you think of the competency based curriculum?

Dominant ideas were that the course was too short for the amount of theory and that there was inadequate clinical practice to develop competent practitioners. As a general rule teachers liked the philosophy underlying competency curricula. An idea that was expressed was for graduates to spend a period of time, perhaps six months, as an intern with a provisional license in order to develop more as a skilled CHW before being finally registered and able to enter the workforce as a fully independent worker.

Any other comments?

Concern was expressed that a large proportion of the CHW graduates were taking positions in the hospital system rather than in the aid posts or health centres.

There are increased demands on the teaching staff from the introduction of a competency curriculum and in many instances these teachers had not been prepared for the competency based system. There are also increased demands on the physical resources of the schools, resources which are often met by the existing stock.

There was also concern expressed that the schools had not been visited by either the NDoH or the MB since the 'new' curriculum had been introduced. Schools generally had been in relatively close contact with the NDoH during the implementation phases of the curriculum but since then no visits had taken place. The only exception to this general position was for Raihu where the principal had directly requested that the MB visit them this year to assess progress in that CHW School.

6. Standards for clinical facilities

A similar structure for this chapter of the report to Chapter 6 has been adopted. The history of the audit used for development of the toll and the presentation of the results is similar.

6.1 STANDARD 1

The clinical facilities and experience in the education program is suitable for the purpose of assisting students to demonstrate the national competency standards.

Performance criterion 1

The educational institution ensures that relevant cultural issues have been considered prior to the placement of individual students

Q 1 Is there developed policy on the allocation of students to clinical facilities?

Yes 36%

No 63%

More of the respondents stated that there was no formal written policy. Respondents stated, however, that a verbal policy existed that guided the allocation of students to their clinical placements. Considerations made before the placement of students included the possible casemix and capacity of a specific clinical facility. If a clinical facility was found to be inadequate for student needs it was no longer used. Cultural matters related to the orientation of students were also considered and if tribal fighting / unrest had occurred recently in an area that facility was not used for student placements.

Q 2 Is there a good rapport between students, communities and clinical facility staff?

Always	Usually	Sometimes	Rarely	Not yet
54%	45%	0%	0%	0%

Respondents thought that there were usually good rapport between clinical staff and students and recognised that the success of a placement was largely dependent on staff student relationships. One of the factors that enhanced this relationship was that staff saw the arrival of students as an opportunity to catch up on other activities, for example, on report preparation. Community health placements required that students mixed with the village communities to which they were allocated, communities that were usually very happy with this interaction.

One of the particular challenges met was the placement of male students in the obstetrics placement as some cultural groups do not accept the presence of men in a birthing environment. Where this occurred the CHW School would adjust the placements to fit.

There is always the potential for personalities to clash and CHW staff may need to intervene in these situations.

Q 3 Have risk factors been considered and a risk management plan developed?

Yes 36%

No 63 x%

Risk factors have been carefully considered by the CHW school staff and a risk plan developed. This plan is generally not a written one however. As well as specific cultural factors other national events such as the recent PNG elections potentially affect the level of risk experienced by students from differing cultural groups and placements would be adjusted.

Q 4 Are cultural practices and behaviour at specific clinical facilities made known to students prior to commencing their clinical practice?

Always	Usually	Sometimes	Rarely	Not yet
82%	9%	9%	0%	0%

Students are most frequently informed of the cultural practices and specific behaviours of groups prior to clinical placements. Students are also informed about the expectations of the CHW school in relation to their personal behaviours. Relationships between male and students were mentioned as a case in point of this preparation.

Performance criterion 2

The casemix of the clinical facility demonstrates the ability to facilitate students meeting their learning objectives

Q 5 Do the monthly statistics demonstrate that the quantity and variety of clinical cases are large enough to provide for students' clinical learning?

Yes 63%

No 36%

Two sources of data were accessed to assess casemix and load. These data include the monthly reports sent from the clinical facilities to the NDoH each month and the quarterly report made to the Anglican Health Services by its facilities. In one instance there was no apparent perusal of casemix or numbers and an assumption made that students would simply find adequate cases to meet their learning needs. In another CHW the size of the clinical facility itself underlay the assumption of casemix adequacy with no other apparent research into casemix being made.

Q 6 Are cases adequately and safely managed?

Yes 54%

No 45%

Respondents were almost evenly divided about the adequacy of case management. If a clinical assessor noticed that a case was being mismanaged he/she would raise this matter with the clinical staff member. The difficulty with the stated approach was that CHW teaching staff are often not found in the clinical facilities.

Performance criterion 3

The environment of the clinical facility is conducive to students meeting their learning objectives

Q 7 Is the clinical environment secure?

Always	Usually	Sometimes	Rarely	Not yet
45%	45%	9%	0%	0%

Respondents were almost evenly divided as to whether or not the clinical environment was secure. CHW staff at Onamuga stated that they found out first whether or not students, particularly female students, would be safe at a given facility and if not another location was found. Kumin had not experienced episodes where students were threatened but Braun had found that local drunkards caused students to feel unsafe. Clinical supervisors were regarded as having responsibility for student safety when there were students in a 'their' facility.

Q 8 Do students feel safe in their clinical facilities?

Always	Usually	Sometimes	Rarely	Not yet
54%	36%	9%	0%	0%

Respondents were almost as evenly divided in response to this question as to the previous one. It was usual for students to contact their CHW School should they feel unsafe in their placement.

Q 9 Are infection control practices in accordance with the national standards?

Always	Usually	Sometimes	Rarely	Not yet
36%	27%	36%	0%	0%

Responsibility for infection control practices was seen to rest with both clinical staff and with students. When the audit team visited clinical facilities attended by students they paid particular attention to handwashing practices. Observation showed that handwashing was most often not carried out and thus the facilities did not meet these most basic requirements for infection control. Reasons given by the facilities were most commonly related to lack of appropriate water, water

tanks or sinks. CHW staff state that handwashing is taught at the schools, and indeed a practical demonstration was observed where handwashing was being taught, but this apparent mismatch between teaching and practise is concerning. In many of the facilities visited by the audit staff, resources and overall working environment was poor and as a result did not enhance the quality clinical practice experience gained by students. Students did not recognise a theory practice gap.

Q 10 Is the clinical facility supportive of the students and provides clinical supervision?

Always	Usually	Sometimes	Rarely	Not yet
73%	27%	0%	0%	0%

Staff from the CHW schools stated that they had trained the clinical facility staff but staff leave the facility and were replaced by others who had not been trained. There was also concern that staff took leave when students came to a facility. The best outcome apparently was when clinical staff were paid a small amount by a CHW to facilitate the clinical experience of students.

6.2 STANDARD 2

The clinical facilities are accessible to students enrolled in the education program

Performance criterion 1

The clinical facility is in a location that provides a safe environment for student learning

Q 11 Does the clinical facility have established physical safety mechanisms in place?

Yes 54%

No 45%

The respondents at the CHW schools did not generally think that they were responsible for the environment of a particular facility and that the facilities were primarily responsible for student safety once the students had been placed in a clinical environment. CHW staff also considered that placements in an associated hospital were safer for students than in a remote clinic.

Q 12 Does the student accommodation have the following established physical safety mechanisms

	Yes	No
Secure doors	82%	18%
Fly wire	73%	27%
Mosquito nets	91%	9%

Accommodation for students while on clinical placement was a matter of a great deal of discussion. A few institutions had dedicated and purpose built students' accommodation but these were the exception. In some instances students were accommodated by facility staff and in other cases

students stayed in bush houses erected for their stay. In each case students took their mosquito nets with them along with bedding, clothing and often food. Student accommodation while on clinical placements was seen by the CHW staff as a matter of great need. There were divided opinions as to who was responsible for building this accommodation and who would be responsible for maintenance and for assuring that any accommodation provided was dedicated to student use. These matters will be addressed in more detail in the infrastructure report.

Performance criterion 2

There is adequate logistical support to facilitate students' clinical learning

Q 13 Is there a working communication linkage eg. Radio or phone/mobile phone?

Yes 91%

No 9%

The most common form of communication used by students out in the clinical areas was mobile phone. The widespread use of mobile phones in effect shifts costs from the schools to the students. A few facilities had been provided with a VHF radio communication system but it was usually not working.

Q 14 Is the clinical facility accessible by affordable means of transport eg. Road, sea or air

Yes 73%

No 27%

A wide range of transport systems were used to get students to their clinical placements. Land transport was usually by an open backed vehicle which left students exposed to the elements and at some physical risk. Roads to the facilities were sometimes impassable either because bridges had been washed away or wet weather had made roads impassable. These events required students to walk to their placements carrying with them their cargo for the placement.

Schools had been given Hilux 10-11 years ago. These vehicles are now at the end of their serviceable lives and as they only have open backs and limited cab accommodation make the transport of students uncomfortable and often unsafe. Some schools have put up a strong argument that these Hilux are replaced with 20 seater buses or a four wheel drive vehicle which would make transporting students to clinical placements more cost effective and less demanding on time.

Some of the facilities use the ambulance from the local hospital to assist in transporting students to their placements and need to buy fuel to reimburse the hospital. An assumption underlying this practice is that the ambulance will be available and if not time in the clinical area is reduced.

CHW schools located on the coast also used boats to transport their students to clinical facilities. Boats were not owned by the schools and needed to be hired thus adding to the costs related to

clinical placements borne by the schools. Gaubin argued that a boat owned by the school would not only strongly contribute to the ease of transporting students along the coast to clinical placements or across to the mainland if necessary but could also be hired out thus creating an income stream for the school.

As well as needing boat transport for taking students to their clinical placements staff on the two islands, Karkar and Ferguson, use water transport to go the larger centre on the mainline to conduct business as well as collect resources for the schools. Kapuna uses boat transport for its contact with the clinical facilities as well as for getting out of the area to obtain student supplies.

Recommendation 25

Schools based on islands or on waterways, that is Gaubin, Kapuna and Salamo, are provided with a banana boat for the transport of students to clinical placements and for hire out to generate income for the schools.

It appeared that only Runginae used air transport and that only because a church run service, MAF, was able to transport students at minimal cost.

Each of the CHW schools stated that transporting students to clinical placements was a major concern and incurred considerable, and annually increasing, expenditure that stretched their limited budgets. Respondents also stated that without additional resources they would not be able to provide adequate and appropriate clinical placements for additional students. There is a very obvious need for additional funds and transport vehicles particularly in light of the need and intention to double student numbers.

Recommendation 26

Transport of students to clinical facilities requires a specific budget. Vehicular resources in each of the schools need renewal and most likely expansion as increased numbers of students access more and increasingly remote clinical facilities.

Performance criterion 3

There is a documented agreement between the educational institution and the clinical facility

Q 15 Is a Memorandum of Understanding (or similar) available indicating the clinical facility's agreement to provide clinical experience and setting out the responsibilities of each party?

Yes 45%

No 54%

In some clinical facilities a written agreement had been made but in more facilities this agreement is verbal. Where a written agreement has been made this is often at the management level of the organisation carrying responsibility for the clinical facility and may not have been seen by clinical staff. Some agreements were made years ago and now no clinical staff remain from the group with whom the agreement was made. It is relatively common for a CHW to write to a clinical facility requesting a placement so some record is obtainable.

6.3 STANDARD 3

The clinical facility complies with the current National Minimum Standards

Performance criterion 1

The clinical facility complies with the current National Minimum Standards for District Health Facilities

Q 16 Are there adequate numbers of qualified and experienced staff?

Always	Usually	Sometimes	Rarely	Not yet
0%	36%	54%	9%	0%

Qualified and experienced clinical staff are sometimes seen as being adequate. A major concern expressed was that facilities rarely had adequate numbers of registered nurses so that CHWs were filling positions for which they were not adequately qualified. Another concern expressed was that staff of the clinical facilities may be experienced but not qualified.

Q 17 Are basic services, equipment and therapeutics available?

Yes 27%

No 73%

There was no certainty that equipment or medications at the clinical facilities would be adequate. Equipment was often lacking or not working. Students from Tinsley took their own equipment with them to their placements. This equipment was basic and included stethoscopes, thermometer and sometimes a sphygmomanometer. Students quite often found that medications were lacking and may return to their home base hospital, such as at Braun, to collect a supply of medications and take back to their allocated clinical facility. Most commonly lacking medications included analgesics, antibiotics and anti malarial drugs.

Staff from the CHWs expressed the opinion that the government facilities were more likely to be poorly resourced than those of a church organisation.

Q 18 Are health outcomes equal to or better than the national average (eg HIS)

	Yes	No
Equal to the national average	18%	18%
No Comment	63%	
Better than the national average	0%	27%
No Comment	73%	

Staff from the CHW schools generally did not know how the statistics of a clinical facility, if available, compared to the national averages. Lemakot and Kumin expressed the opinion that the statistics from the churches clinical institutions were better than those from the government run facilities which were thought to be below the national averages. Braun took feedback from students about the quality of care they saw in a clinical facility and if it was well below standard students were not placed in that facility again. At Gaubin hospital where students took clinical placements the birth mortality and morbidity statistics were superior to the national average as were those for under 5 year old children.

The medical director expressed considerable pride in the current statistics from Gaubin hospital.

Performance criterion 2

The clinical facility has quality improvement processes in place

Q 19 Are staff of the clinical facility provided with in-service education as needed?

Always	Usually	Sometimes	Rarely	Not yet
36%	18%	27%	18%	0%

Kumin, Raihu and Runginae thought that staff members in clinical facilities were provided with adequate in-service education. A more common position was that the in-service required by staff in clinical facilities was the responsibility of the local PHO. Salamo stated that there were just no funds for CHW schools to be engaged in providing clinical facility staff with in-service education. One of the questions asked of clinical staff in facilities visited by the audit team was related to on-going education. If CHW staff provided any formal education it was related to clinical assessment of students. Clinical staff did learn about new treatments if they were able to attend education sessions such as the weekly service offered at Braun each Wednesday or in the bi-monthly in-service sessions offered to CHWs.

The Sutton Report (2005) recommended ongoing workshops for continuing staff development particularly in relation to the requirements of the 'new' curriculum. At Braun, which was the only facility to discuss this recommendation, these workshops took place until 2007 but ceased at that time. New staff members have no formal introduction to the 'new' curriculum except for those offered by CHW school staff.

Q 20 Are staff of the clinical facility subject to performance review?

Yes 54%

No 45%

Respondents were almost evenly divided about whether or not staff in clinical facilities had performance reviews. Staff management was generally seen to be outside of the province of the CHW schools and the organising group of each facility and staff would review clinical staff if such reviews were carried out.

Q 21 Is feedback from client surveys obtained?

Yes 0%

No 100%

There were occasions when clients gave verbal feedback but no actual client surveys are in use.

Q 22 Are chart audit and other audit processes carried out

Yes 54%

No 45%

A general response was that chart audits were not the responsibility of the schools. However, a MO may audit patient charts when a facility was visited, alternately the charge person of the health facility may review charts. One respondent suggested that the quarterly tally sheets sent by the health facilities to the PHO could be used as an auditing process.

6.4 STANDARD 4

The clinical facility has adequate resources to safely and competently provide learning opportunities for students

Performance criterion 1

The clinical facility has adequate qualified and competent staff to facilitate and support the educational program

Q 23 Is there a staff development plan for facility staff?

Yes 73%

No 27%

Staff development plans were thought by the school staff to be more likely in church run institutions. Popondetta General Hospital had a staff development plan and selected staff members were sent annually for qualification upgrades or other forms of development. Other more *ad hoc* forms of development included information related to clinical management changes. There was a comment though that the same staff members were seen each year in the same clinical facilities by the CHW staff indicating little in the way of staff development.

Q 24 Are there adequate numbers of specialists to support clinical learning eg obstetricians, paediatricians?

Yes 9%

No 91%

Across the country, and particularly in isolated areas, specialists were very few and did not take an active role in the learning support of clinicians.

Q 25 Are there adequate numbers of support staff?

Yes 45%

No 54%

More institutions did not have support staff than had support staff. Where clinical facilities are run by a church agency, that body made the decision about its staffing and was seen as independent to questions related to CHW staffing.

Performance criterion 2

The physical resources of the clinical facility are safe and adequate to meet the educational program requirements

Q 26 Are teaching and learning facilities available?

Yes 45%

No 54%

One of the dominant concerns expressed by the audit respondents was the availability of suitable clinical facilities for students. Increasing student numbers was considered to be a major challenge for the schools as a bigger number of clinical facilities will need to be used and these will be increasingly remote. With increasing remoteness will be the associated problems of remoteness affecting students. Concerns expressed by respondents related to these matters emphasise the significance of matters of transporting students to their placements as previously mentioned.

Q 27 Is adequate space provided for student learning eg private areas for study or giving feedback?

Yes 18%

No 82%

Generally there is no space in a clinical facility specifically allocated for talking with students. Respondents did state though that it was common for staff assessing students to take a student aside in order to create some privacy while giving feedback. At student focus sessions held by the audit team a common point of concern was that while on their clinical placements the accommodation available to students did not allow them space for private study. The concern of students about a mismatch between their accommodation and need for private study appeared related to distance. The more remote a facility, the less likely it seemed that students would be able to study privately. Just having electricity at a facility impacted on the possibility of studying in the evenings. Once again increasing student numbers will impact on the facilities available for clinical practice and the related physical circumstances of students.

Q 28 Are buildings secure and safe?

Yes 63%

No 36%

Again there was a mix of responses to a question. Some schools took the position that if the area was considered unsafe students would not be sent there for a placement. Other schools stated they could not generalise as some of the buildings used were safe while others were not. There appeared to be an unstated position that there is usually a level of risk particularly in remote places and that the schools worked around these risks.

Performance criterion 3

The clinical facility has adequate financial resources to facilitate students achieving their learning objectives

Q 29 Does the facility have stable finances and processes in place for developing annual budgets?

Yes 36%

No 36%

No Comment 27%

Some respondents chose not to answer this question which was more generally seen not to be the business of the CHW schools.

Q 30 Are sound financial administrative practices in place to ensure accountability?

Yes 36%

No 45%

No Comment 18%

Again some respondents could not answer this question. A general explanation was that the clinical staff did not become involved in managing the finances of a clinical facility.

Q 31 Is adequate administrative support available showing the clinical facilities' support for the education program?

Yes 45%

No 54%

Support could be given but only in the large health facilities such as the health centres where there may be administrative support.

6.5 Additional comments

Comments

What impact will the projected increase in student load have on the teaching/learning experience of students in clinical placement?

The most significant impact discussed would be the increased difficulty in obtaining suitable clinical placements. Respondents were concerned about increasing costs of transport to more distant places, about the difficulties of good supervision of the students and about the possibilities of more students being placed in any one facility. The last mechanism for managing increased student numbers would result in each student having reduced opportunity for completing their Clinical Skills Logbook as more students accessed the same available patient load. Increasing student number in a facility would also add pressure on the clinical staff making them less willing to accept students to their facility.

Additional transport needs was a specific concern. As many schools already experience difficulty in getting their students out on placements having additional students will increase their transport challenges.

As more remote facilities will need to be used the challenges of accommodating students while on their clinical placements also was seen as a major difficulty. Related church agencies have been approached to build student accommodation in the clinical facilities that are being used now and churches are generally not able to build accommodation for students.

While there was general concern about the possibility of increasing student number and the increased challenges of clinical placements, Lemakot stated it would be able to find places for students that are near enough to the school to make visiting students possible.

What feedback is obtained on student clinical practice ability from:

Patients

Comments made by patients were informal and included both good and bad comment. Feedback from patients was sometimes directly sought and sometimes occurred spontaneously after an episode of care.

Community

One of the advantages of students going on placements related to the community health modules was that the villagers really appreciated the presence of the students and their work and frequently requested that students come back. A comment made by Onamuga was that the communities appreciated the Christian conduct of the students who were better behaved than students from government institutions. This comment demonstrates a healthy sense of competition that appeared to exist between church and government institutions.

Staff?

Clinical staff may have opportunity to comment on students if they attended the respective board meetings of the CHW schools. Other opportunities were in clinical assessment meetings that sometimes occurred between clinical and school staff. Written reports were sometimes made of there was a significant problem with a student or in relation to student placements generally.

Any other comments?

At this point respondents took the opportunity to emphasise a number of matters that had been discussed previously. These included the costs of transporting students to their clinical placements and the difficulties in accommodating students while there. These matters will need to be resolved prior to any increase in student numbers in the CHW schools.

A second matter restated and of obvious concern was NDoH funding of the CHW schools. These funds were seen as woefully inadequate. In some cases there were no student messes at a school and students became responsible for their own food. In these situations only very small amount of monies are given as a weekly allowance. For example at St Margaret's students are given k20.5 a week and at Onamuga students are given only k15 a week. Out of these small allowances students need to buy food as well as any other personal items they require. A great sense of shame was expressed by staff because of these funding arrangements.

The low salaries paid at a casual rate to CHW teaching staff was also emphasised. Lack of retirement benefits for staff on casual rates was also described and given as the major reason for teachers leaving the schools. The relationship of the CHW system to the church system is viewed as one that requires careful examination as apparent 'buck passing' between the CHS and the NDoH did not enhance school success.

6.6 Summary

Overall the CHW students accessed a variety of clinical facilities for their clinical placement experience. These facilities may be very remote and accessing the placements continues to be an expensive and logistical challenge for the CHW schools. Accommodating the students is also difficult and can be expensive with some schools having no permanent facilities to be used by students.

Students are required to demonstrate mastery of clinical skills while on clinical placements, skills that are required to meet the competency standards required by the CWH 'new' curriculum. Supervision of the students remains *ad hoc* with some schools taking little part in the supervision or clinical assessment of their students.

7. National level recommendations; validation, ranking and logical groupings

7.1 Source of recommendations

Throughout the processes of auditing the CHW schools and of writing this report recommendations have been made. These recommendations are listed in order of development in the Executive Summary. The page numbers given with each of the recommendations allows readers of this report to consider the logic surrounding each of the recommendations made. Recommendations related to specific schools have also been made and are included in the following chapter

7.2 Validation of recommendations

At the completion of the visits made to each of the CHW schools all school principals came together for two days in a workshop format. At that workshop each of the participants accessed the draft report and its related recommendations. Each of the participants had opportunity to consider the interpretations of their school and work situation made from data collected by the audit team and assess it for accuracy and omissions.

Participants also had opportunity to assess recommendations included in the report. A few recommendations were amended on the advice of the participants and another added. These processes increased the validity of recommendations made as well as giving each of the participants an increased sense of ownership of the report. The completed list of recommendations is the one included in the executive summary of this report.

7.3 Ranking of recommendations

The Terms of Reference for the Community Health Worker School Capacity Diagnostic Audit included a requirement to rank recommendations made into those for immediate implementation, those for implementation within two years and those for implementation within three years. At the completion of the processes of validation the participants then undertook the task of ranking the recommendations. Initial ranking of the recommendations was made towards the end of the first workshop day with participants having opportunity to privately discuss rankings and recommendations overnight. Once again the participation of the principals increased the likelihood of each of the principals having a sense of ownership and that their individual interests in the recommendations made had been fairly considered.

The following list of recommendations is the list as ranked at the principals' workshop. It should be noted that the order of the recommendations is as suggested for implementation by the principals. There were no recommendations allocated for 'within three years' however, those listed last may be shifted to that timeline.

7.4 Immediate implementation

Recommendation 1

Matters related to the salary rates of CHW teaching staff must be resolved by December 31, 2012 if the CHW schools are to continue admitting students into the CHW course. Should resolution not occur immediately the teaching programs of the CHW schools will fail.

Recommendation 10

An overall plan for development of teaching staff in CHW is created including details of award to be undertaken, timeline and funding agency. Obligations of funded staff members need to be very clearly stated with appropriate consequences in place should staff member fail to meet contractual obligations.

Recommendation 12

A workshop on data management as in Recommendation 5 should be expanded to include basic book keeping skills. Without such skill development relevant CHW staff are less likely to maintain accurate financial records and to maintain a balance between income and expenditure thus putting the financial viability of the schools at continued risk.

Recommendation 6

Names of staff entering the CHW teaching workforce are added to the HRMB payroll without delay to avoid unnecessary staff attrition and to avoid costs to church health funds.

Recommendation 8

A funded secretarial position is provided by the NDoH for each of the CHW schools to enhance the administrative effectiveness of the principal. As a general principle all support staff such as cook, driver, security currently funded through CHW resources are included in an increased funding stream from the NDoH.

Recommendation 9

A defined funding stream for the clinical supervision of students on clinical placements is provided by the NDoH

Recommendation 21

A wide ranging review of the existing 'new' curriculum is strongly recommended. Preparation of the current curriculum was completed in 2004 with resources by 2006. Given that the curriculum is now being audited and that a significant number of matters related to its age and content have been identified quality improvement can only be assured prior to increasing student numbers if the current curriculum is reviewed and refreshed

Recommendation 22

In the proposed review of the 'new' curriculum careful attention must be paid to renewing the library resources required for teaching/learning support. In addition to refreshing the library resources list CHW schools should be provided with the listed library resource.

Recommendation 25

Schools based on islands and waterways, that is Gaubin, Kapuna and Salamo, are provided with a banana boat for the transport of students to clinical placements.

Recommendation 26

Transport of students to clinical facilities requires a specific budget. Vehicular resources in each of the schools need renewal and most likely expansion as increased numbers of students access more and increasingly remote clinical facilities.

Recommendation 23

Resourcing of CHW schools is a major problem. An alternate model to the current AusAID Scholarship Scheme could see monies being directly provided to the CHW schools. Instead of scholarships being allocated to individual students the same amount of money could be provided directly to the school for general supports of the student body. Monies to be used for texts by individual students would be better spent on purchasing resources to be used across the student body thus supplementing the existing scant resources used for libraries and teaching aids.

Recommendation 24

If the AusAID Scholarship System is varied to an alternate model where monies are directed in whole to the CHW schools for dispersion across the student body, as recommended, monies allocated within this funding stream should be used for an annual print run of LRBs sufficient for each student to have their personal copy of each of the module LRBs and that they keep this LRB for future reference.

Recommendation 5

Workshops in basic data management through effective computing systems are offered to school administrators and principals, to facilitate the accurate maintenance of school student and financial records.

Recommendation 3

Processes related to the registration of completing CHW students are reviewed with a simpler system of registration being introduced.

Recommendation 4

Completing CHW students should be registered promptly in order to facilitate their entry into the workforce as quickly as possible and without legal risk.

Recommendation 16

Tutors staffing the CHWs and workplace assessors are offered a workshop that includes time management processes. This workshop should use the tools included in assessing students as exemplars for the appropriate pathways and timelines for entering all assessment results.

7.5 Implementation within two years

Recommendation 8

A funded secretarial position is provided by the NDoH for each of the CHW schools to enhance the administrative effectiveness of the principal. As a general principle all support staff such as cook, driver, security currently funded through CHW resources are included in an increased funding stream from the NDoH.

Recommendation 10

An overall plan for development of teaching staff in CHW is created including details of award to be undertaken, timeline and funding agency. Obligations of funded staff members need to be very clearly stated with appropriate consequences in place should staff member fail to meet contractual obligations.

Recommendation 12

A workshop on data management as in Recommendation 5 should be expanded to include basic book keeping skills. Without such skill development relevant CHW staff members are less likely to maintain accurate financial records and to maintain a balance between income and expenditure thus putting the financial viability of the schools at continued risk.

Recommendation 14

Internal evaluation of program outcomes essential for continued quality improvement are more likely to occur if the teaching staff are offered a workshop related to the purposes, processes and benefits of evaluation. Such a workshop is recommended and could be incorporated within a workshop related more generally to teaching methods

Recommendation 15

Regular external evaluations of each of the CHW schools are implemented by the MB and NDoH with formal recommendations made for improvements in practice. These evaluations should be made at a pre-determined time and sequence and completed annually or bi-annually. Without external

evaluations the quality of the teaching programs of the schools is likely to remain at existing levels and the necessary precursor of quality improvement prior to an increase in student numbers will not be achieved

Recommendation 17

Information included for tutors attending the CHW time management workshop includes the processes of maintain up to date Evidence Portfolios

Recommendation 18

Clarification of respective responsibilities for education of clinical staff in relation to national competency standards is obtained. Should the CHW schools be seen to carry this responsibility then additional funding is provided to the schools

Recommendation 19

Teaching staff in the CHW schools are updated on the quality improvement methods inherent in course evaluation and change implementation. The importance of quality improvement is not well understood by staff who do not hold a teaching qualification and those who do would benefit from refreshers on updated evaluation methods

Recommendation 20

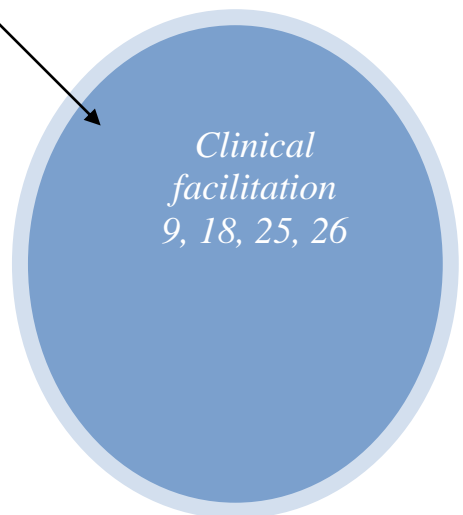
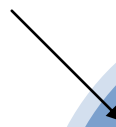
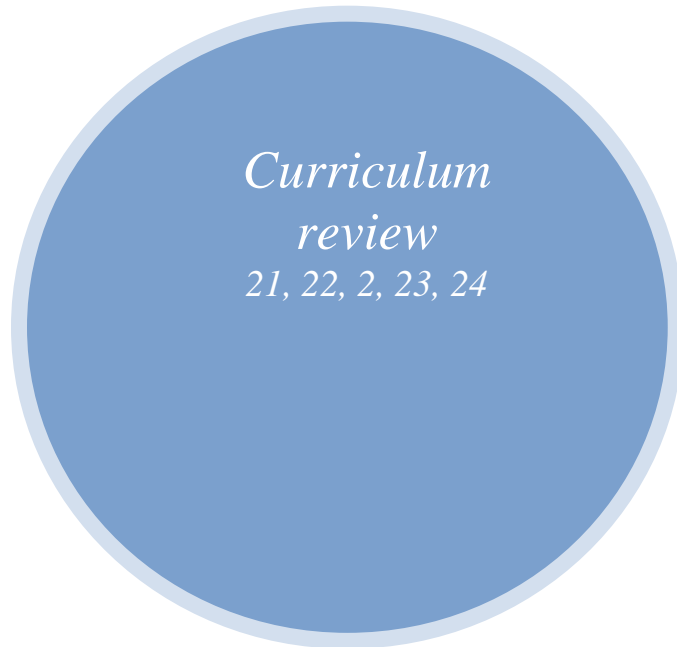
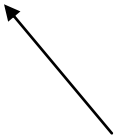
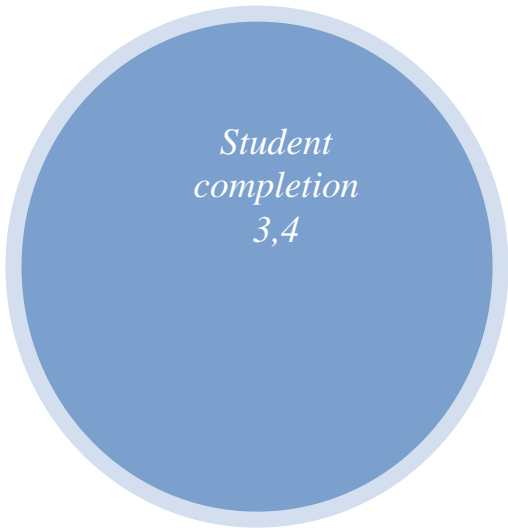
Any workshop planned for addressing quality matters related to course evaluation and change implementation should be broadened to include wider matters related to quality improvement including policy development and implementation

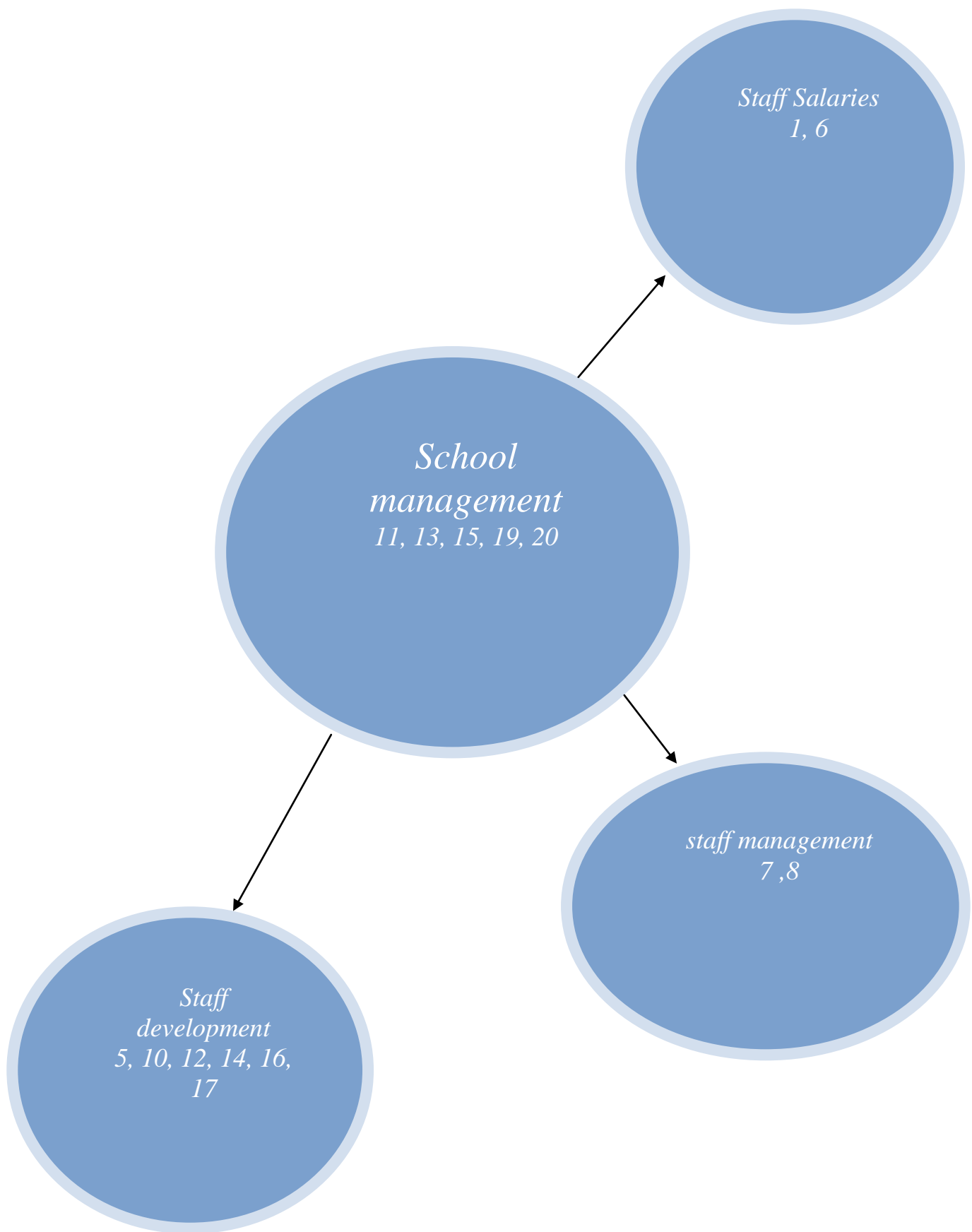
Recommendation 2

While it is useful to explore further the issue of raising entry requirements to the CHW course from a Year 10 to Year 12 entry requirement, in light of its impact on admission numbers and potential career paths in health services, such a decision should be considered very carefully.

7.6 Logical clusters

An alternate way of considering the recommendations made is through logical clusters. This possible way of considering recommendations is given below and includes two major groupings. These groupings are those of Curriculum and its related matters and School Management with its related matters. The diagrams below show these groupings and relationships.





7.7 Comments on logical clusters

Central to any effective educational program is the curriculum being implemented. Not only does the curriculum direct the content of students learning it also includes relationships between curricula content and the teaching / learning processes to be used that will enhance student learning. As the 'new' curriculum currently being used in the CHW educational program was developed over the years 2002-04 it is now quite old. The ultimate aim of an effective clinical practitioner requires, amongst other things, currency of practice. The impact of evidence based practice on clinical implementation has seen an increasing pace of change in best practice and any curriculum can only include best practice that was current at the time of its writing. These arguments are central for understanding the importance of renewal of the curriculum. It is the professional opinion of the audit team that curriculum renewal is urgent and should be commenced immediately.

Linked to any curriculum renewal (Recommendation, 21) are considerations related to library resources (Recommendation 22), entry requirements of students (Recommendation 2) and school funding models. Clinical practicums are an essential component of a curriculum centred on the preparation of clinical practitioners. Recommendations related to the clinical learning of students are closely related to the curricula cluster and include funding (Recommendation 9), development of clinical assessors (Recommendation 18) and transport of students to their clinical placements (Recommendations 25, 26).

Student completions and their entry to practice also form a group related to the curriculum cluster. The recommendations in this group put an argument for students being able to legally enter clinical practice much more quickly than now occurs (Recommendations 3, 4).

The second major cluster is related to improving the effectiveness of school management. Central to this cluster are matters of funding (Recommendations 11, 13), external school reviews (Recommendation 15), quality evaluation (Recommendation 20) and improvement (Recommendation 19).

Closely aligned with effective school management are issues of staff development. These include data management (Recommendation 5, 12), staff development (Recommendation 10), internal school evaluation (Recommendation 14, 16) and time management (Recommendation 17). Staff management matters are included through teacher student ratios (Recommendation 7) and teaching load (Recommendation 8). Staff salaries are represented in Recommendations 1 and 6.

7.8 Summary comments on national recommendations

The Community Health Worker School Capacity Diagnostic Audit listed eleven CHW schools for audit. Each of these has been completed. A set of tools were developed that focused on matters related to the adequacy of the school and its infrastructure for the preparation of CHW required for the health care needs of the citizens of Papua New Guinea.

From the audit of the CHW schools a set of recommendations at national level has been prepared and presented after being validated by the principals of the CHW schools. Principals of each of the schools articulated a strong sense of optimism that the work of the audit will be expressed in an overall improvement in the quality of the CHW schools, quality that must precede proposed increases in CHW student numbers.

8. School specific recommendations

The Terms of Reference for the CHW Schools Audit required that school specific recommendations are made. These have been completed using data from the auditing processes. While school specific recommendations have been made readers are reminded that the quality of a school is dependent on the curriculum being implemented and in the case of the CHW schools the national curriculum used across the schools is in real need of review. As with other sections of this report the schools are presented alphabetically and are presented in such a way as to facilitate selecting out each of the schools for discussion with the appropriate staff member/s.

8.1 CHW School: Braun

Agency: Evangelical Lutheran Church of Papua New Guinea

Overall assessment summary

Overall assessment of the ability of the Braun CHW School to implement the standard CHW curriculum is good. Strengths of the school include a teaching staff comprised of members that hold a required health professional qualification as well as a teaching qualification. The clinical program is generally well planned but may see students going to their clinical placement late because of the difficulties of transport.

Braun, as do each of the CHW schools, teaches the 'new' curriculum. This curriculum adopts a competency-based approach. Implementation of the curriculum has added to the workload of the teachers and to the complexities of student assessments, particularly clinical assessments. Teachers at Braun have generally been able to assess students at the appropriate times, as suggested by the curriculum, and have been able to keep the clinical assessment records of the students up-to-date for the most part. There is need, however, for curriculum renewal as considerable amounts of content is now out-dated. Staff specifically stated their need for refresher programs related to teaching methodologies that would improve the quality of their teaching activities.

The clinical placement environments visited by the audit staff appeared typical of the aid posts and health centres where students gain experience. Two major difficulties are faced by the school when its students are on their clinical placements, the first is getting the students to their placements and the second is accommodating the students while they are in the clinical areas.

When students are unable to proceed to clinical placements in the rural areas they attend the Braun Hospital to gain experience. While the hospital offers a range of experiences for CHW students the focus there is on intervention rather than prevention. One of the advantages of being located on the same campus as the hospital, however, is that specialist staff come to the CHW lessons for student teaching/learning of their related specialist areas such as the prevention/care of HIV Aids.

Teaching facilities such as the library and demonstration room are in need of improvement to bring the school to the required standard. A simple example, in the demonstration room there are no handwashing facilities so students do not develop the crucial practice of handwashing before each attempt at a practical procedure, a habit that is essential for safe care in the clinical environments.

Staff teaching some of the practical procedures currently borrow equipment from the hospital but this practice assumes that the hospital has enough equipment to lend to the school as well as being willing to do so. Other equipment such as manikins are old and in poor repair. Students stated, and teaching staff agreed, that practical procedures may not be demonstrated in the classroom which meant that these skills needed to be observed while on clinical placements prior to attempting the skill themselves. An alternate practice sometimes used is that demonstrations of clinical skills are made outside of regular teaching hours when equipment may be more available from the hospital. These practices mean students and staff are engaged in learning activities outside of their regular hours. It also means that students do not feel well prepared when going on their placements, effective learning time while on clinical placements is not maximised and that patients attending the clinical facilities may be put at risk.

Students going into the clinical areas are more likely to develop effective observation and diagnostic skills when they have access to basic clinical equipment such as a stethoscope and thermometers. For this reason some of the better schools have been equipping their students with personally held equipment that is used while on placements. This is a practice that is supported by the audit team as something that will improve the effectiveness of the CHW workforce in the long term.

The physical environments of the school including student and staff accommodations are reported separately. These facilities will limit possible increases in student numbers as they are barely adequate for existing students.

Implications for the future

While the Braun school is generally functioning well, staff expressed concern about increases in student numbers. One of the major requirements would be additional teaching staff and there are currently noted difficulties in attracting appropriate persons to teach in the CHW system. Ratios of teaching staff are determined by those listed in the current curriculum document and these would need to be maintained when student numbers increase.

One major consideration about the potential rise in student enrolments is the impact this will have on available space and teaching methodologies. The existing classrooms are adequate for current enrolment numbers but as student cohorts increase in size two major implications are possible. The first is that all students would not be accommodated in the existing one classroom which implies either two cohorts of students will need to be taught or larger classrooms are constructed. The impact on teaching methodologies is more serious. Given that a competency based approach is used teachers need to interact more intensively with each of the students to facilitate learning. Even with current student numbers of around 30 students per cohort this is difficult to do. When the number of students are increased it will mean multiple groups of students of a size that is possible for interaction, say a maximum of 26-30. This increase will mean multiple groups either running simultaneously with multiple teachers or different groups timetabled to attend class at different times. It will mean additional teachers whichever way this particular challenge is approached.

Staffing requirements: As stated in Community Health Worker Certificate Program (Part 1) (2001).

It is **recommended** that the staffing guidelines set out in the Community Health Worker Certificate Program (Part 1) (2001) document are implemented. These requirements identify the category of teaching staff required as well as teacher to student ratio that has been used in assessing staff required for current enrolment levels in each of the CWH schools. While teacher to student ratios at Braun are within the stated guidelines, Braun currently does not employ a clinical assessor as required by the above document. It needs to be noted that future expected increases in CHW student enrolment numbers will require additional staff.

While the salaries of CHW teaching staff are paid by the NDoH there is currently a considerable time lag of between six to twelve months before the name of the approved candidate is added to the payroll. Braun has one such teacher who is yet to be on the NDoH payroll. It is therefore **recommended** that AusAID consider supplementing the Braun CHW school budget for the amounts paid by them to staff not yet on the NDOH payroll and their new teaching staff and that this supplementation continue until the name/s of the additional staff are added to the NDoH payroll.

In addition to teaching staff a **recommendation** has been made by the CHW principals group for secretarial support for principals.

Staff development:

The quality of a teaching institution is impacted on by the quality of its teaching staff. For example, there is an observed correlation between the school teaching staff members each holding a teaching qualification as well as their health qualification.

Health professional qualification

Each of the teaching staff holds a health professional qualification. Staff members who hold a CHW certificate do not have a route to a higher level qualification. Four of the staff hold a nursing qualification at diploma level and some are keen to upgrade to a degree level qualification. There is currently no budget for the support of staff upgrading their qualification. It is therefore **recommended** that a nominated staff member annually be given opportunity for such an upgrade as there will be improvements in teaching quality as a result.

Education qualification:

All currently employed teaching staff members at Braun have an education qualification. One staff member is currently upgrading to a BEd.

Specific purpose short courses

The CHW audit found a range of areas where CHW teaching staff members need developmental assistance in order to better serve their school populations. Potential increases in student numbers will increase demands on teachers suggesting more acute need for these specific purpose workshops. Specific purpose short courses are **recommended**.

Student clinical experience supports:

Transporting students to their clinical placements remains a major problem for Braun CHW School. The school currently uses one Toyota Hilux to transport students. Students are piled into the back of

the vehicle with their luggage and when it rains a plastic cover is thrown over both passengers and goods. At times it takes multiple trips to get the students to their placements and the practice puts lives of students at considerable risk. Improved transport for students is therefore **recommended**.

Maximising the learning of students on clinical placements is facilitated when students each carry a small set of clinical equipment with them.

Student held resources

Each of the students also carries, or is expected to carry, a set of the standard treatment books. These books guide the processes of care: diagnosis, care planning including prescription of required medications that are the basis of the CHW interventional practice. It is therefore **recommended** that the required standard treatment books are supplied.

Teaching resources:

Recommendation of library resources is limited by the age of the current CHW curriculum which contains a complete, and now out-of-date, list of required resources. Those listed will support teachers in their activities related to class preparation in the interim before curriculum renewal and are not viewed as those that would be freely accessed by students. Library cataloguing systems at Braun are not well developed with subsequent loss of texts when these become freely accessed.

Teaching equipment: The items listed in recommendations were identified by staff as being needed to improve teaching. The objects identified may not be held by the school or are old and not working.

Recommendations are given below for immediate, medium and long term implementation.

Rank one – immediate implementation	1. Staffing recruitment to meet the requirements listed in the Community Health Worker Certificate Program (Part 1) (2001) include: <ul style="list-style-type: none"> clinical assessor with CHW or RN qualification pp.22, 24, 25, 103	1	CHW School NDoH AusAID
	2. Staffing recruitment to support principal in administrative activities of the school <ul style="list-style-type: none"> Secretarial assistant pp.25, 103	1	CHW School NDoH AusAID
	3. Staff development to achieve qualification at higher professional level includes: <ul style="list-style-type: none"> Bachelor of Nursing course as offered by UPNG pp.29, 30, 71, 103	1 school nominated	CHW School NDoH AusAID
	4. Specific purpose short courses for staff development <ul style="list-style-type: none"> Management processes: time, basic data processing and computing CHW school booking keeping / accounting Library resource management: procurement, 	All staff members. Principal, secretarial assistant,	CHW School NDoH AusAID

	cataloguing pp. 34, 58, 72, 104	curriculum implementer 1 staff member nominated by principal	
Rank one – immediate implementation	5. Student clinical experience support: transport, 20 seater vehicle pp. 83, 84 104	1	AusAID
	6. Student clinical experience support, student held resources: <ul style="list-style-type: none"> • Student stethoscope (1 per student) • Student sphygmomanometer (1 per student) • Clinical thermometers (2 per student) pp. 85, 104	35 35 70	AusAID NDoH
	7. Student held Standard treatment books (1 per student) <ul style="list-style-type: none"> • Paediatric Standard Treatment Book (8th Ed.) 2006 • Obstetrics & Gynaecology Standard Treatment Book (6th Ed.) 2010 • Standard Treatment for Common Illnesses of Adults in Papua New Guinea (4th Ed.) 2005 pp. 85, 104	35 35 35	NDoH
	8. Teaching support: new library resources <ul style="list-style-type: none"> • Carter, P (2012), <i>Lippincott's textbook for nursing assistants: a humanistic approach to caregiving</i>. Williams & Wilkins Health: Philadelphia • Government of Papua New Guinea (2010), <i>National health plan 2011-2020 Back to basics</i>. Gov PNG: Port Moresby • Johnson, R (2010), <i>Skills for midwifery practice</i>. Churchill Livingstone: Edinburgh • McMurray, A (2010), <i>Community health & wellness: primary health care in practice</i>. Elsevier Australia: Chatswood NSW • Pairman, S. et al (2010) <i>Midwifery preparation for practice</i>. Elsevier: Chatswood NSW • Peate, I. & Nair, M (Eds.) (2011), <i>Fundamentals of anatomy and physiology for student nurses</i>. Wiley Blackwell: Chichester • Smith, B (2011), <i>Nursing care: an essential guide for nurses and health care workers in primary and secondary care</i>. Pearson Prentice Hall: Harlow • Watson, R (2011), <i>Anatomy and physiology for nurses</i>. Elsevier: Edinburgh pp. 32, 72, 104	1 5 2 2 2 5 5 5	AusAID
	9. Teaching support: equipment <ul style="list-style-type: none"> • Overhead projector • Transparency film – copier (box 100 sheets) 	2 (to allow for two classes to be held simultaneously) 5	NDoH AusAID

	<ul style="list-style-type: none"> • Specific purpose copier markers: black, blue, red, green • Basic dressing sets: 2 kidney dishes 3 gallipots 3 dressing forceps 1 suture holder 1 pair dressing scissors 1 dressing tray • Dressing consumables: suture needles and gut suture cutters sterile saline solution combine dressing packs bandages in three widths adhesives in three widths pp. 73, 77, 104 	5 2 Usually in packs of 10	PHO Medical stores
Rank two – medium term implementation	10. Staff development to achieve qualification at higher professional level includes: <ul style="list-style-type: none"> • Bachelor of Nursing course as offered by UPNG pp. 29, 30, 71, 103 	1 school nominated	AusAID
	11. Specific purpose short courses for staff development <ul style="list-style-type: none"> • Course evaluation and policy development: processes, benefits and implementation pp. 52, 53, 103 	1 principal	CHW School NDoH AusAID
	12. Student clinical experience support, student held resources: <ul style="list-style-type: none"> • Student stethoscope (1 per student) • Student sphygmomanometer (1 per student) • Clinical thermometers (2 per student) pp. 85, 104 	35 35 70	AusAID NDoH
	13. Student held Standard treatment books (1 per student) <ul style="list-style-type: none"> • Paediatric Standard Treatment Book (8th Ed.) 2006 • Obstetrics & Gynaecology Standard Treatment Book (6th Ed.) 2010 • Standard Treatment for Common Illnesses of Adults in Papua New Guinea (4th Ed.) 2005 pp. 85, 104 	35 35 35	NDoH
	14. Teaching support: equipment <ul style="list-style-type: none"> • Staff computers • Basic procedures adult manikin • Basic dressing sets: 2 kidney dishes 3 gallipots 3 dressing forceps 1 suture holder 1 pair dressing scissors 1 dressing tray • Dressing consumables: suture needles and gut suture cutters sterile saline solution combine dressing packs bandages in three widths adhesives in three widths • Audiometer 	3 1 2 1	Usually in packs of 10 AusAID

	pp. 73, 77, 104		
Rank three – long term implementation	15. Student clinical experience support, student held resources: <ul style="list-style-type: none"> • Student stethoscope (1 per student) • Student sphygmomanometer (1 per student) • Clinical thermometers (2 per student) pp. 85, 104	35 35 70	AusAID NDoH
	16. Student held Standard treatment books (1 per student) <ul style="list-style-type: none"> • Paediatric Standard Treatment Book (8th Ed.) 2006 • Obstetrics & Gynaecology Standard Treatment Book (6th Ed.) 2010 • Standard Treatment for Common Illnesses of Adults in Papua New Guinea (4th Ed.) 2005 pp. 85, 104	35 35 35	NDoH
	17. Teaching support: equipment <ul style="list-style-type: none"> • Basic procedures child manikin • Teaching stethoscopes pp. 73, 77, 104	1 3	AusAID

8.2 CHW School: Gaubin

Agency: Evangelical Lutheran Church of Papua New Guinea

Overall assessment summary

Overall assessment of the ability of the Gaubin CHW School to implement the standard CHW curriculum is fair. Strengths of the school include a teaching staff comprised of members that hold a required health professional qualification. There is some discussion that the current school principal is about to retire which exerts some impact on the leadership of the school. Not all staff hold a teaching qualification. The clinical program is generally planned but implementation of the timetable is haphazard and may see students going to their clinical placement late. As the school is situated on Kar Kar Island clinical placements require water transport as well as land with students attending the mainland for some of their clinical placements.

Gaubin, as does each of the CHW schools, teaches the 'new' curriculum. This curriculum adopts a competency-based approach. Implementation of the curriculum has added to the workload of the teachers and to the complexities of student assessments, particularly clinical assessments. Teachers at Gaubin have experienced some difficulties with assessing students at the appropriate times, as suggested by the curriculum, and keeping the clinical assessment records of the students was seen to be haphazard. As is common for the CHW schools there is need for curriculum renewal as considerable amounts of content is now outdated. Programs related to teaching methodologies that would improve the quality of their teaching activities are essential to attain to a better standard at Gaubin.

The clinical placement environments visited by the audit staff appeared typical of the aid posts and health centres where students gain experience but there appeared to be some difficulty with the supervision of students while on placements. Two major difficulties are faced by the school when its students are on their clinical placements, the first is getting the students to their placements and the second is accommodating the students while they are in the clinical areas.

When students are unable to proceed to clinical placements in the rural areas they attend the Gaubin Hospital to gain experience. Gaubin Hospital expresses considerable interest in the development of CHW practitioners as around half of the staff at the Gaubin Hospital are graduates from the CHW school. While the hospital offers a range of learning experiences for CHW students the focus there is on intervention rather than prevention. At the student meeting however students stated they appreciated going to the hospital for clinical placements but recognised that there were financial reasons for attending practice there rather than going to the community centres for clinical placements. Another advantage of being located on the same campus as the hospital is that specialist staff come to the CHW school to give lessons related to their specialist areas such as the prevention/care of HIV Aids.

Gaubin has a new two storey school building that includes a library and demonstration room. However there is no plumbing to this building and as a result there are no handwashing facilities in the demonstration room. Students therefore do not develop the crucial practice of handwashing before each attempt at a practical procedure, a habit that is essential for safe care in the clinical environments. While there is library space there are scant resources. Staff stated that they could

not remember when new books were last bought for the school library as there has been no budget for such purchases. There appears to be no cataloguing system that allows students to borrow texts if such were available. Teaching aids are not well kept which makes it difficult for teaching staff to readily find the resources needed for classroom activities.

Staff teaching some of the practical procedures currently borrow equipment from the hospital but this practice assumes that the hospital has enough equipment to lend to the school as well as being willing to do so. In fact, at the staff meeting the hospital Director of Nursing stated that this practice was not to be encouraged. Other equipment such as manikins are old and in poor repair. Students stated, and teaching staff agreed, that practical procedures may not be demonstrated in the classroom which meant that these skills needed to be observed while on clinical placements prior to attempting the skill themselves. An alternate practice sometimes used is that demonstrations of clinical skills are made outside of regular teaching hours when equipment may be more available from the hospital. These practices mean students and staff are engaged in learning activities outside of their regular hours. It also means that students do not feel well prepared when going on their placements, effective learning time while on clinical placements is not maximised and that patients attending the clinical facilities may be put at risk.

Students going into the clinical areas are more likely to develop effective observation and diagnostic skills when they have access to basic clinical equipment such as a stethoscope and thermometers. For this reason some of the better schools have been equipping their students with personally held equipment that is used while on placements. This is a practice that is supported by the audit team as something that will improve the effectiveness of the CHW workforce in the long term.

The physical environments of the school including student and staff accommodations are reported separately. These facilities, particularly in the case of Gaubin, will limit possible increases in student numbers as they are barely adequate for existing students.

There were noticeable difficulties in finding financial information at Gaubin. An end result of the difficulties in tracking income and expenditure is that the school runs out of money. A recent example left the school with no money to feed students and needed to rely on the Gaubin Hospital. Teaching staff state that they simply do not have the skills to manage budgets. As student numbers increase in the future such events should not be allowed to happen and staff skills desperately need improving.

Implications for the future

While the Gaubin CHW school is generally functioning, it is not functioning very well. Staff expressed concern about increases in student numbers. One of the major requirements would be up-skilling existing staff before additional students are enrolled and then in employing additional teaching staff. Ratios of teaching staff are determined by those listed in the current curriculum document and these would need to be maintained when student numbers increase.

One major consideration about the potential rise in student enrolments is the impact this will have on available space and teaching methodologies. The existing classrooms are adequate for current enrolment numbers but as student cohorts increase in size two major implications are possible. The first is that all students would not be accommodated in the existing one classroom which implies either two cohorts of students will need to be taught or larger classrooms are constructed. Running multiple groups of students at the same level has timetabling implications and managing these multiple groups may well exceed the abilities of the current staff.

While impact on timetabling is serious, the impact on teaching methodologies is more serious. Given that a competency based approach is used teachers need to interact more intensively with each of the students to facilitate learning. The current student numbers of around 35-40 students per cohort make this difficult to do. When the number of students are increased it will mean multiple groups of students of a size that is possible for interaction, say a maximum of 26-30. Whether the solution is either to run multiple groups simultaneously with multiple teachers or to timetable groups timetabled to attend class at different times additional teachers will be required.

Staffing requirements: As stated in Community Health Worker Certificate Program (Part 1) (2001)

It is **recommended** that the staffing guidelines set out in the Community Health Worker Certificate Program (Part 1) (2001) document are implemented. These requirements identify the category of teaching staff required as well as the teacher to student ratio that has been used in assessing staff required for current enrolment levels in each of the CWH schools. While teacher to student ratios at Gaubin currently exceed the stated guidelines only one group of students is enrolled. Gaubin did not accept new first year students in 2012. Gaubin currently does not employ a clinical assessor as required by the above document. It needs to be noted that future expected increases in CHW student enrolment numbers will require additional staff.

While the salaries of CHW teaching staff are paid by the NDoH there is currently a considerable time lag of between six to twelve months before the name of the approved candidate is added to the payroll. Gaubin does not have any teachers waiting to be added to the NDoH payroll. In view of the necessity to employ additional staff when student numbers rise, it is therefore **recommended** that AusAID consider supplementing the Gaubin CHW school budget for the amounts that will be paid to staff not yet on the NDOH payroll. It is further recommended that this supplementation continues until the name/s of the additional staff are added to the NDoH payroll.

In addition to teaching staff a **recommendation** has been made by the CHW principals group for secretarial support for principals.

Staff development:

The quality of a teaching institution is impacted on by the quality of its teaching staff. For example, there is an observed correlation between the school teaching staff members each holding a teaching qualification as well as their health qualification.

Health professional qualification

Each of the teaching staff holds a health professional qualification. Staff members who hold a CHW certificate do not have a route to a higher level qualification. Three of the staff hold a nursing or midwifery qualification at diploma level and some are keen to upgrade to a degree level qualification. There is currently no budget for the support of staff upgrading their qualification. It is therefore **recommended** that a nominated staff member annually be given opportunity for such an upgrade as there will be improvements in teaching quality as a result.

Education qualification:

Three teaching staff members employed at Gaubin hold an education qualification. Opportunity needs to be given to the unqualified staff to obtain a relevant teaching qualification.

Specific purpose short courses

The CHW audit found a range of areas where CHW teaching staff members need developmental assistance in order to better serve their school populations. Potential increases in student numbers will increase demands on teachers suggesting more acute need for these specific purpose workshops. Specific purpose short courses are **recommended**.

Student clinical experience supports:

Transporting students to their clinical placements remains a major problem for Gaubin CHW School. The school currently uses one Toyota Hilux to transport students or relies on the Gaubin Hospital Ambulance. Gaubin has the additional challenges of being an island school with students also needing to be transported by sea to clinical placements. At present there is only the possibility of hiring a motorised longboat at a cost that is rapidly cumulative with the result that more and more of student placements are being held at the Gaubin Hospital. Improved transport for students is therefore **recommended**.

Maximising the learning of students on clinical placements is facilitated when students each carry a small set of clinical equipment with them. The following are **recommended**.

Student held resources

Each of the students also carries, or is expected to carry, a set of the standard treatment books. These books guide the processes of care: diagnosis, care planning including prescription of required medications that are the basis of the CHW interventional practice. It is therefore **recommended** that the required standard treatment books are supplied.

Teaching resources:

Recommendation of library resources is limited by the age of the current CHW curriculum which contains a complete, and now out-of-date, list of required resources. The recommended resources are those that will support teachers in their activities related to class preparation in the interim before curriculum renewal and are not to be viewed as those that would be freely accessed by students. Library cataloguing systems at Gaubin are not well developed with subsequent loss of texts when these become freely accessed.

Teaching equipment: The items listed in recommendations were identified by staff as being needed to improve teaching. The objects identified may not be held by the school or are old and not working.

Recommendations are made for short term, medium and long term implementation

Rank one – immediate implementation	18. Staffing recruitment to meet the requirements listed in the Community Health Worker Certificate Program (Part 1) (2001) include: <ul style="list-style-type: none"> clinical assessor with CHW or RN qualification Pg. 103	1	CHW School NDoH AusAID
	19. Staffing recruitment to support principal in administrative activities of the school <ul style="list-style-type: none"> Secretarial assistant Pg. 103	1	CHW School NDoH AusAID
	20. Staff development to achieve qualification at higher professional level includes: <ul style="list-style-type: none"> Bachelor of Nursing course as offered by UPNG Pg. 103	1 school nominated	CHW School NDoH AusAID
	21. Staff development to achieve an education qualification: <ul style="list-style-type: none"> Diploma of Education such as offered at University of Goroka OR Divine Word University Pg. 110	1 school nominated	CHW School NDoH AusAID
	22. Specific purpose short courses for staff development <ul style="list-style-type: none"> Management processes: time, basic data processing and computing CHW school booking keeping / accounting Library resource management: procurement, cataloguing Teaching methodologies including the use of teaching technologies Assessing students on clinical practice, recording results 	All staff members. Principal, secretarial assistant, curriculum implementer 1 staff member nominated by principal All staff Clinical assessor and nominated clinical staff from health clinics	CHW School NDoH AusAID CHW PHO AusAID
	23. Student clinical experience support: transport, 'banana boat' Pg. 104	1	AusAID
	24. Student clinical experience support, student held resources: <ul style="list-style-type: none"> Student stethoscope (1 per student) Student sphygmomanometer (1 per student) 	35	AusAID NDoH

	<ul style="list-style-type: none"> Clinical thermometers (2 per student) Pg. 104 	35 70	
Rank one – immediate implementation	<p>25. Student held Standard treatment books (1 per student)</p> <ul style="list-style-type: none"> Paediatric Standard Treatment Book (8th Ed.) 2006 Obstetrics & Gynaecology Standard Treatment Book (6th Ed.) 2010 Standard Treatment for Common Illnesses of Adults in Papua New Guinea (4th Ed.) 2005 <p>Pg. 104</p>	35 35 35	NDoH
	<p>26. Teaching support: new library resources</p> <ul style="list-style-type: none"> Carter, P (2012), <i>Lippincott's textbook for nursing assistants: a humanistic approach to caregiving</i>. Williams & Wilkins Health: Philadelphia Government of Papua New Guinea (2010), <i>National health plan 2011-2020 Back to basics</i>. Gov PNG: Port Moresby Johnson, R (2010), <i>Skills for midwifery practice</i>. Churchill Livingstone: Edinburg McMurray, A (2010), <i>Community health & wellness: primary health care in practice</i>. Elsevier Australia: Chatswood NSW Pairman, S. et al (2010) <i>Midwifery preparation for practice</i>. Elsevier: Chatswood NSW Peate, I. & Nair, M (Eds.) (2011), <i>Fundamentals of anatomy and physiology for student nurses</i>. Wiley Blackwell: Chichester Smith, B (2011), <i>Nursing care: an essential guide for nurses and health care workers in primary and secondary care</i>. Pearson Prentice Hall: Harlow Watson, R (2011), <i>Anatomy and physiology for nurses</i>. Elsevier: Edinburg <p>Pg. 104</p>	1 5 2 2 2 5 5 5	AusAID
	<p>27. Teaching support: equipment</p> <ul style="list-style-type: none"> Overhead projector Transparency film – copier (box 100 sheets) Specific purpose copier markers: black, blue, red, green Basic dressing sets: 2 kidney dishes 3 gallipots 3 dressing forceps 1 suture holder 1 pair dressing scissors 1 dressing tray Dressing consumables: suture needles and gut suture cutters sterile saline solution combine dressing packs bandages in three widths adhesives in three widths 	2 (to allow for two classes to be held simultaneously) 5 5 2 Usually in packs of 10	NDoH AusAID PHO Medical stores

	Pg. 104		
Rank two – medium term implementation	28. Staff development to achieve qualification at higher professional level includes: <ul style="list-style-type: none"> Bachelor of Nursing course as offered by UPNG Pg. 103 	1 school nominated	AusAID
	29. Staff development to achieve an education qualification: <ul style="list-style-type: none"> Diploma of Education such as offered at University of Goroka OR Divine Word University Pg. 110 	1 school nominated	CHW School NDoH AusAID
	30. Specific purpose short courses for staff development <ul style="list-style-type: none"> Course evaluation and policy development: processes, benefits and implementation Pg. 103 	1 principal	CHW School NDoH AusAID
	31. Student clinical experience support, student held resources: <ul style="list-style-type: none"> Student stethoscope (1 per student) Student sphygmomanometer (1 per student) Clinical thermometers (2 per student) Pg. 104 	35 35 70	AusAID NDoH
	32. Student held Standard treatment books (1 per student) <ul style="list-style-type: none"> Paediatric Standard Treatment Book (8th Ed.) 2006 Obstetrics & Gynaecology Standard Treatment Book (6th Ed.) 2010 Standard Treatment for Common Illnesses of Adults in Papua New Guinea (4th Ed.) 2005 Pg. 104 	35 35 35	NDoH
	33. Teaching support: equipment <ul style="list-style-type: none"> Staff computers Basic procedures adult manikin Basic dressing sets: 2 kidney dishes 3 gallipots 3 dressing forceps 1 suture holder 1 pair dressing scissors 1 dressing tray Dressing consumables: suture needles and gut suture cutters sterile saline solution combine dressing packs bandages in three widths adhesives in three widths Audiometer 	3 1 2 Usually in packs of 10 1	NDoH AusAID PHO Medical stores NDoH

Rank three – long term implementation	<p>34. Student clinical experience support, student held resources:</p> <ul style="list-style-type: none"> • Student stethoscope (1 per student) • Student sphygmomanometer (1 per student) • Clinical thermometers (2 per student) <p style="text-align: right;">Pg. 104</p>	<p>35 35 70</p>	<p>AusAID NDoH</p>
	<p>35. Student held Standard treatment books (1 per student)</p> <ul style="list-style-type: none"> • Paediatric Standard Treatment Book (8th Ed.) 2006 • Obstetrics & Gynaecology Standard Treatment Book (6th Ed.) 2010 • Standard Treatment for Common Illnesses of Adults in Papua New Guinea (4th Ed.) 2005 <p style="text-align: right;">Pg. 104</p>	<p>35 35 35</p>	<p>NDoH</p>
	<p>36. Teaching support: equipment</p> <ul style="list-style-type: none"> • Basic procedures child manikin • Teaching stethoscopes <p style="text-align: right;">Pg. 104</p>	<p>1 3</p>	<p>AusAID</p>

8.3 CHW School: Kapuna

Agency: Gulf Christian Services

Overall assessment summary

Overall assessment of the ability of the Kapuna CHW School to implement the standard CHW curriculum is satisfactory. Strengths of the school include a teaching staff comprised of members that hold a required health professional qualification. Not all teaching staff hold a teaching qualification. The clinical program is generally well planned. However, implementation of the timetable is made difficult by specific geographical matters. As the school is situated in a river delta clinical placements primarily require water transport.

Kapuna, as does each of the CHW schools, teaches the 'new' curriculum. This curriculum adopts a competency-based approach. Implementation of the curriculum has added to the workload of the teachers and to the complexities of student assessments, particularly clinical assessments. As is common for the CHW schools there is need for curriculum renewal as considerable amounts of content is now outdated. Programs related to teaching methodologies that would improve the quality of their teaching activities are essential to attain to a better standard at Kapuna.

The clinical placement environments visited by the audit staff appeared typical of the aid posts and health centres where students gain experience but there appeared to be some difficulty with the supervision of students while on placements as Kapuna does not employ a clinical assessor. Two major difficulties are faced by the school when its students are on their clinical placements, the first is getting the students to their placements and the second is accommodating the students while they are in the clinical areas. The lack of both water transport and student accommodation while out on clinical placement was reported by the principal.

As well as community placement students from Kapuna CHW school attend placements at the Kikori District Hospital as well as the Kapuna Rural Hospital. These combined clinical facilities are stated as being inadequate for the current student population. More distant placements make it difficult for the school to transport students to these facilities as well as there being difficulty in supervising the students on placements and with accommodating the students away from the CHW school. These challenges make it imperative that potential increases in student numbers is made with caution.

Kapuna reports it currently has sufficient accommodation and classroom space for its existing student numbers but is concerned that it will have insufficient space for an increased student number. Current funding given by the NDoH to the school on a quarterly basis is not seen to meet the needs of the school as it attempts to maintain a high quality teaching program. Kapuna has not purchased new books for the school library as there has been no budget for such purchases. It has not made purchases of clinical teaching equipment either and has a practice of borrowing clinical equipment from the Kapuna Rural Hospital when such equipment is needed for teaching/learning. The practice of borrowing equipment, although common across schools, is regarded as unacceptable practice by the school.

Students going into the clinical areas are more likely to develop effective observation and diagnostic skills when they have access to basic clinical equipment such as a stethoscope and thermometers. For this reason some of the better schools have been equipping their students with

personally held equipment that is used while on placements. This is a practice that is supported by the audit team as something that will improve the effectiveness of the CHW workforce in the long term.

The physical environments of the school including student and staff accommodations are reported separately. These facilities limit possible increases in student numbers as they are barely adequate for existing students.

Implications for the future

While the Kapuna CHW school is generally functioning well staff members expressed concern about increases in student numbers. One of the major requirements would be up-skilling existing staff before additional students are enrolled and then in employing additional teaching staff. Ratios of teaching staff are determined by those listed in the current curriculum document and these would need to be maintained when student numbers increase.

One major consideration about the potential rise in student enrolments is the impact this will have on available space and teaching methodologies. The existing classrooms are adequate for current enrolment numbers but as student cohorts increase in size two major implications are possible. The first is that all students would not be accommodated in the same classroom which implies either two cohorts of students will need to be taught or larger classrooms are constructed. Running multiple groups of students at the same level has timetabling implications and managing these multiple groups may well exceed the abilities of the current staff.

While impact on timetabling is serious, the impact on teaching methodologies is more serious. Given that a competency based approach is used teachers need to interact more intensively with each of the students to facilitate learning. The current student numbers of around 20-25 students per cohort make this difficult to do. When the number of students are increased it will mean multiple groups of students of a size that is possible for interaction, say a maximum of 25. Whether the solution is either to run multiple groups simultaneously with multiple teachers or to timetable groups timetabled to attend class at different times, additional teachers will be required.

Staffing requirements: As stated in Community Health Worker Certificate Program (Part 1) (2001)

It is **recommended** that the staffing guidelines set out in the Community Health Worker Certificate Program (Part 1) (2001) document are implemented. These requirements identify the category of teaching staff required as well as the teacher to student ratio that has been used in assessing staff required for current enrolment levels in each of the CWH schools. While teacher to student ratios at Kapuna currently exceed the stated guidelines these are relatively small groups. Kapuna currently employs a clinical assessor as required by the above document. It needs to be noted that future expected increases in CHW student enrolment numbers will require additional staff.

While the salaries of CHW teaching staff are paid by the NDoH there is currently a considerable time lag of between six to twelve months before the name of the approved candidate is added to the payroll. Kapuna has a clinical assessor whose name is yet to be added to the NDoH payroll. In view of the necessity to employ additional staff when student numbers rise, it is therefore **recommended** that AusAID consider supplementing the Kapuna CHW school budget for the amounts that are being

paid, and will be paid, for staff not yet on the NDOH payroll. It is further recommended that this supplementation continues until the name/s of the additional staff are added to the NDoH payroll.

In addition to teaching staff a **recommendation** has been made by the CHW principals group for secretarial support for principals.

Staff development:

The quality of a teaching institution is impacted on by the quality of its teaching staff. For example, there is an observed correlation between the school teaching staff members each holding a teaching qualification as well as their health qualification.

Health professional qualification

Each of the teaching staff holds a health professional qualification. Staff members who hold a CHW certificate do not have a route to a higher level qualification. Four of the staff hold a nursing or midwifery qualification at diploma level and some are keen to upgrade to a degree level qualification. There is currently no budget for the support of staff upgrading their qualification. It is therefore **recommended** that a nominated staff member annually be given opportunity for such an upgrade as there will be improvements in teaching quality as a result.

Education qualification:

Three teaching staff members employed at Kapuna hold an education qualification. Opportunity needs to be given to the unqualified staff to obtain a relevant teaching qualification.

Specific purpose short courses

The CHW audit found a range of areas where CHW teaching staff members need developmental assistance in order to better serve their school populations. Potential increases in student numbers will increase demands on teachers suggesting more acute need for these specific purpose workshops. Specific purpose short courses are **recommended**.

Student clinical experience supports:

Transporting students to their clinical placements remains a major problem for Kapuna CHW School. Kapuna has the challenge of being situated in a river delta. At present there is only the possibility of hiring a motorised longboat a cost that is rapidly cumulative with the result that more and more of student placements are being held at the Kapuna Rural Hospital. Improved transport for students is therefore **recommended**.

Student held resources

Maximising the learning of students on clinical placements is facilitated when students each carry a small set of clinical equipment with them.

Each of the students also carries, or is expected to carry, a set of the standard treatment books. These books guide the processes of care: diagnosis, care planning including prescription of required medications that are the basis of the CHW interventional practice. It is therefore **recommended** that the required standard treatment books are supplied.

Teaching resources:

Recommendation of library resources is limited by the age of the current CHW curriculum which contains a complete, and now out-of-date, list of required resources. These listed resources are those that will support teachers in their activities related to class preparation in the interim before curriculum renewal and are not to be viewed as those that would be freely accessed by students. Library cataloguing systems at Kapuna are not well developed with subsequent loss of texts when these become freely accessed.

Teaching equipment

The items listed in recommendations were identified by staff as being needed to improve teaching. The objects identified may not be held by the school or are old and not working.

Recommendations are given below for immediate, medium and long term implementation.

Recommendations:

Rank one – immediate implementation	37. Staffing recruitment to meet the requirements listed in the Community Health Worker Certificate Program (Part 1) (2001) include: <ul style="list-style-type: none"> clinical assessor with CHW or RN qualification Pg. 103	1	CHW School NDoH AusAID
	38. Staffing recruitment to support principal in administrative activities of the school <ul style="list-style-type: none"> Secretarial assistant Pg. 103	1	CHW School NDoH AusAID
	39. Staff development to achieve qualification at higher professional level includes: <ul style="list-style-type: none"> Bachelor of Nursing course as offered by UPNG Pg. 103	1 school nominated	CHW School NDoH AusAID
	40. Staff development to achieve an education qualification: <ul style="list-style-type: none"> Diploma of Education such as offered at University of Goroka OR Divine Word University Pg. 110	1 school nominated	CHW School NDoH AusAID
	41. Specific purpose short courses for staff development <ul style="list-style-type: none"> Management processes: time, basic data processing and computing CHW school booking keeping / accounting Library resource management: procurement, cataloguing <ul style="list-style-type: none"> Teaching methodologies including the use of teaching technologies 	All staff members. Principal, secretarial assistant, curriculum implementer 1 staff member nominated by principal All staff	CHW School NDoH AusAID

	<ul style="list-style-type: none"> Assessing students on clinical practice, recording results 	Clinical assessor and nominated clinical staff from health clinics	CHW PHO AusAID
Rank one – immediate implementation	42. Student clinical experience support: transport, 'banana boat' Pg. 104	1	AusAID
	43. Student clinical experience support, student held resources: <ul style="list-style-type: none"> Student stethoscope (1 per student) Student sphygmomanometer (1 per student) Clinical thermometers (2 per student) Pg. 104	35 35 70	AusAID NDoH
	44. Student held Standard treatment books (1 per student) <ul style="list-style-type: none"> Paediatric Standard Treatment Book (8th Ed.) 2006 Obstetrics & Gynaecology Standard Treatment Book (6th Ed.) 2010 Standard Treatment for Common Illnesses of Adults in Papua New Guinea (4th Ed.) 2005 Pg. 104	35 35 35	NDoH
	45. Teaching support: new library resources <ul style="list-style-type: none"> Carter, P (2012), <i>Lippincott's textbook for nursing assistants: a humanistic approach to caregiving</i>. Williams & Wilkins Health: Philadelphia Government of Papua New Guinea (2010), <i>National health plan 2011-2020 Back to basics</i>. Gov PNG: Port Moresby Johnson, R (2010), <i>Skills for midwifery practice</i>. Churchill Livingstone: Edinburg McMurray, A (2010), <i>Community health & wellness: primary health care in practice</i>. Elsevier Australia: Chatswood NSW Pairman, S. et al (2010) <i>Midwifery preparation for practice</i>. Elsevier: Chatswood NSW Peate, I. & Nair, M (Eds.) (2011), <i>Fundamentals of anatomy and physiology for student nurses</i>. Wiley Blackwell: Chichester Smith, B (2011), <i>Nursing care: an essential guide for nurses and health care workers in primary and secondary care</i>. Pearson Prentice Hall: Harlow Watson, R (2011), <i>Anatomy and physiology for nurses</i>. Elsevier: Edinburg Pg. 104	1 5 2 2 2 5 5 5	AusAID
	46. Teaching support: equipment <ul style="list-style-type: none"> Overhead projector Transparency film – copier (box 100 sheets) Specific purpose copier markers: black, blue, red, 	2 (to allow for two classes to be held simultaneously) 5 5	NDoH AusAID

	<ul style="list-style-type: none"> green Basic dressing sets: 2 kidney dishes 3 gallipots 3 dressing forceps 1 suture holder 1 pair dressing scissors 1 dressing tray Dressing consumables: suture needles and gut suture cutters sterile saline solution combine dressing packs bandages in three widths adhesives in three widths Pg. 104 	2 Usually in packs of 10	PHO Medical stores
Rank two – medium term implementation	47. Staff development to achieve qualification at higher professional level includes: <ul style="list-style-type: none"> Bachelor of Nursing course as offered by UPNG Pg. 103 	1 school nominated	AusAID
	48. Staff development to achieve an education qualification: <ul style="list-style-type: none"> Diploma of Education such as offered at University of Goroka OR Divine Word University Pg. 110 	1 school nominated	CHW School NDoH AusAID
	49. Specific purpose short courses for staff development <ul style="list-style-type: none"> Course evaluation and policy development: processes, benefits and implementation Pg. 103 	1 principal	CHW School NDoH AusAID
	50. Student clinical experience support, student held resources: <ul style="list-style-type: none"> Student stethoscope (1 per student) Student sphygmomanometer (1 per student) Clinical thermometers (2 per student) Pg. 104 	35 35 70	AusAID NDoH
	51. Student held Standard treatment books (1 per student) <ul style="list-style-type: none"> Paediatric Standard Treatment Book (8th Ed.) 2006 Obstetrics & Gynaecology Standard Treatment Book (6th Ed.) 2010 Standard Treatment for Common Illnesses of Adults in Papua New Guinea (4th Ed.) 2005 Pg. 104 	35 35 35	NDoH
	52. Teaching support: equipment <ul style="list-style-type: none"> Staff computers Basic procedures adult manikin Basic dressing sets: 2 kidney dishes 3 gallipots 3 dressing forceps 1 suture holder 1 pair dressing scissors 1 dressing tray Dressing consumables: suture needles and gut suture cutters sterile saline solution combine dressing packs 	3 1 2 Usually in packs of 10	NDoH AusAID PHO Medical stores

	<ul style="list-style-type: none"> • Audiometer 	bandages in three widths adhesives in three widths	1	NDoH
Rank three – long term implementation	53. Student clinical experience support, student held resources:			
	<ul style="list-style-type: none"> • Student stethoscope (1 per student) • Student sphygmomanometer (1 per student) • Clinical thermometers (2 per student) 		35 35 70	AusAID NDoH
	Pg. 104			
	54. Student held Standard treatment books (1 per student)			
	<ul style="list-style-type: none"> • Paediatric Standard Treatment Book (8th Ed.) 2006 • Obstetrics & Gynaecology Standard Treatment Book (6th Ed.) 2010 • Standard Treatment for Common Illnesses of Adults in Papua New Guinea (4th Ed.) 2005 		35 35 35	NDoH
	Pg. 104			
	55. Teaching support: equipment			
	<ul style="list-style-type: none"> • Basic procedures child manikin • Teaching stethoscopes 		1 3	AusAID
	Pg. 104			

8.4 CHW School: Mother of the Divine Shepherd, Kumin CHW School

Agency: Catholic Diocese of Mendi

Overall assessment summary

Overall assessment of the ability of the Kumin CHW School to implement the standard CHW curriculum is very good. In the opinion of the auditors, this school ranks in the top three of those visited. Strengths of the school include a proactive principal and teaching staff who hold a required health professional qualification as well as a teaching qualification. Kumin is the only school of those visited with a staff member holding a master level qualification. The clinical program is generally well planned.

Kumin, as does each of the CHW schools, teaches the 'new' curriculum. This curriculum adopts a competency-based approach. Implementation of the curriculum has added to the workload of the teachers and to the complexities of student assessments, particularly clinical assessments. Teachers at Kumin have been able to assess students at the appropriate times, as suggested by the curriculum, and have been able to keep the clinical assessment records of the students more up-to-date than some of the other schools visited. Part of the success with on-time clinical assessment of students has been maintenance of close links with the clinical facilities where students are placed. Kumin, as do some other schools, adopts a process of offering students additional time in their candidature to complete the required clinical assessments. While this practice allows for students to complete it adds additional costs to the school with students remaining with the school after the two year fee paying time has ended. As well as considerable amounts of content being outdated the practice of extending candidature time emphasises the need for curriculum renewal. Staff emphasised the difficulties in recruiting a full staff complement because of the difficulties experienced with salary rates, a concern that should now have been amended. Students commented on the shortage of teachers, currently only three.

The clinical placement environments visited by the audit staff was impressive in that it actively welcomed the presence of students. Even with this enthusiasm these staff stated that accepting students added to their workload particularly when students needed to be assessed. The school has held assessment workshops for the staff to ensure clinical staff have the appropriate student clinical assessment skills. One of the facilities visited offers AIDS specific care where students are able to become more skilled in caring for this special needs group.

Teaching facilities such as the library and demonstration room are in a new building which is plumbed. This means that the demonstration room has handwashing facilities so students are encouraged to develop the crucial practice of handwashing before each attempt at a practical procedure, a habit that is essential for safe care in the clinical environments. The demonstration room has adequate cupboards where teaching aids were placed in an orderly manner. The school does not have a complete set of equipment however.

Staff members teaching some of the practical procedures currently borrow equipment from the closely located model aide post. Other equipment such as manikins are old and in poor repair. Even though there is pressure from lack of equipment students stated they felt well prepared when going out on clinical placements.

Students going into the clinical areas are more likely to develop effective observation and diagnostic skills when they have access to basic clinical equipment such as a stethoscope and thermometers. For this reason some of the better schools have been equipping their students with personally held equipment that is used while on placements. This is a practice that is supported by the audit team as something that will improve the effectiveness of the CHW workforce in the long term.

The physical environments of the school including student and staff accommodations are reported separately. The facilities at Kumin however are generally adequate for an increase in student number.

Implications for the future

The Kumin school is generally functioning very well, however, staff expressed concern about increases in student numbers. One of the major requirements would be additional teaching staff and there are currently noted difficulties in attracting appropriate persons to teach in the CHW system. Ratios of teaching staff are determined by those listed in the current curriculum document and these would need to be maintained when student numbers increase. In 2012 Kumin did not accept a new cohort of students and its current staffing are only sufficient for its present students load. This teaching complement includes the principal who carries the administrative responsibilities of the school as well as a teaching load. Students commented that at times the principal is unable to attend to her teaching duties leaving them to work independently on their set module.

Lack of teaching staff is the biggest impediment faced by Kumin related to the potential increase in student number. The mix of professional backgrounds of the current staff means that one of the teachers, an Environmental Health Officer is unable to teach the clinical modules.

Staffing requirements: As stated in Community Health Worker Certificate Program (Part 1) (2001)

It is **recommended** that the staffing guidelines set out in the Community Health Worker Certificate Program (Part 1) (2001) document are implemented. These requirements identify the category of teaching staff required as well as teacher to student ratio that has been used in assessing staff required for current enrolment levels in each of the CWH schools. While teacher to student ratios at Kumin currently meet in the stated guidelines, Kumin did not accept students in 2012 and has a small student enrolment. Staff ratios will need to be adjusted by 2013 to remain within the required ratios. Kumin currently does not employ a clinical assessor as required by the above document. It needs to be noted that future expected increases in CHW student enrolment numbers will require additional staff.

While the salaries of CHW teaching staff are paid by the NDoH there is currently a considerable time lag of between six to twelve months before the name of the approved candidate is added to the payroll. It is therefore **recommended** that AusAID consider supplementing the Kumin CHW school budget for the amounts that will be paid by them to staff after additional staff are employed and who not yet on the NDOH payroll. It is also recommended that this supplementation continue until the name/s of the additional staff are added to the NDoH payroll.

In addition to teaching staff a **recommendation** has been made by the CHW principals group for secretarial support for principals.

Staff development:

The quality of a teaching institution is impacted on by the quality of its teaching staff. For example, there is an observed correlation between the school teaching staff members each holding a teaching qualification as well as their health qualification.

Health professional qualification

Each of the teaching staff holds a health professional qualification. Staff members who hold a CHW certificate do not have a route to a higher level qualification. Two of the staff hold a nursing qualification at diploma level. Kumin is requiring one of these staff to upgrade to Bachelor of Midwifery in order to more adequately fill the teaching requirements of the school. There is currently no budget for the support of staff upgrading their qualification. It is therefore **recommended** that a nominated staff member annually be given opportunity for such an upgrade as there will be improvements in teaching quality as a result.

Education qualification:

All currently employed teaching staff members at Kumin have an education qualification although one is stated as a certificate. This staff member could be given the opportunity to upgrade to a diploma. Additional staff that will be required may not have a teaching qualification and should be given the opportunity to obtain such.

Specific purpose short courses

The CHW audit found a range of areas where CHW teaching staff members need developmental assistance in order to better serve their school populations. Potential increases in student numbers will increase demands on teachers suggesting more acute need for these specific purpose workshops. Specific purpose short courses are **recommended**.

Student clinical experience supports:

Transporting students to their clinical placements remains a major problem for Braun CHW School. The school currently uses one Toyota Hilux to transport students. Students are piled into the back of the vehicle with their luggage and when it rains a plastic cover is thrown over both passengers and goods. At times it takes multiple trips to get the students to their placements and the practice puts lives of students at considerable risk. Improved transport for students is therefore **recommended**.

Maximising the learning of students on clinical placements is facilitated when students each carry a small set of clinical equipment with them.

Student held resources

Each of the students also carries, or is expected to carry, a set of the standard treatment books. These books guide the processes of care: diagnosis, care planning including prescription of required medications that are the basis of the CHW interventional practice. It is therefore **recommended** that the required standard treatment books are supplied.

Teaching resources:

Recommendation of library resources is limited by the age of the current CHW curriculum which contains a complete, and now out-of-date, list of required resources. Those listed will support teachers in their activities related to class preparation in the interim before curriculum renewal and are not viewed as those that would be freely accessed by students.

Teaching equipment

The items listed in recommendations were identified by staff as being needed to improve teaching. The objects identified may not be held by the school or are old and not working.

Recommendations are given below for immediate, medium and long term implementation.

Recommendations:

Rank one – short term implementation	56. Staffing recruitment to meet the requirements listed in the Community Health Worker Certificate Program (Part 1) (2001) includes: <ul style="list-style-type: none"> • Deputy principal with CHW, EHO or RN qualification • Senior tutor with CHW, EHO or RN qualification • Tutor with CHW, EHO or RN qualification • Clinical assessor with CHW or RN qualification 	1	CHW School NDoH AusAID
	57. Staffing recruitment to support principal in administrative activities of the school <ul style="list-style-type: none"> • Secretarial assistant <p style="text-align: right;">Pg. 103</p>	1	CHW School NDoH AusAID
	58. Staff development to achieve qualification at higher professional level includes: <ul style="list-style-type: none"> • Bachelor of Nursing course as offered by UPNG <p style="text-align: right;">Pg. 103</p>	1 school nominated	CHW School NDoH AusAID
	59. Staff development to achieve an education qualification: <ul style="list-style-type: none"> • Diploma of Education such as offered at University of Goroka OR Divine Word University <p style="text-align: right;">Pg. 110</p>	1 school nominated	CHW School NDoH AusAID
	60. Specific purpose short courses for staff development <ul style="list-style-type: none"> • Management processes: time, basic data processing and computing • CHW school booking keeping / accounting • Library resource management: procurement, cataloguing 	All staff members. Principal, secretarial assistant, curriculum	CHW School NDoH AusAID

		implementer 1 staff member nominated by principal	
Rank one – short term implementation	61. Student clinical experience support: Toyota 10 seater land cruiser Pg. 104	1	AusAID
	62. Student clinical experience support, student held resources: <ul style="list-style-type: none"> • Student stethoscope (1 per student) • Student sphygmomanometer (1 per student) • Clinical thermometers (2 per student) Pg. 104	35 35 70	AusAID NDoH
	63. Student held Standard treatment books (1 per student) <ul style="list-style-type: none"> • Paediatric Standard Treatment Book (8th Ed.) 2006 • Obstetrics & Gynaecology Standard Treatment Book (6th Ed.) 2010 • Standard Treatment for Common Illnesses of Adults in Papua New Guinea (4th Ed.) 2005 Pg. 104	35 35 35	NDoH
	64. Teaching support: new library resources <ul style="list-style-type: none"> • Carter, P (2012), <i>Lippincott's textbook for nursing assistants: a humanistic approach to caregiving</i>. Williams & Wilkins Health: Philadelphia • Government of Papua New Guinea (2010), <i>National health plan 2011-2020 Back to basics</i>. Gov PNG: Port Moresby • Johnson, R (2010), <i>Skills for midwifery practice</i>. Churchill Livingstone: Edinburg • McMurray, A (2010), <i>Community health & wellness: primary health care in practice</i>. Elsevier Australia: Chatswood NSW • Pairman, S. et al (2010) <i>Midwifery preparation for practice</i>. Elsevier: Chatswood NSW • Peate, I. & Nair, M (Eds.) (2011), <i>Fundamentals of anatomy and physiology for student nurses</i>. Wiley Blackwell: Chichester • Smith, B (2011), <i>Nursing care: an essential guide for nurses and health care workers in primary and secondary care</i>. Pearson Prentice Hall: Harlow • Watson, R (2011), <i>Anatomy and physiology for nurses</i>. Elsevier: Edinburg Pg. 104	1 5 2 2 2 5 5 5	AusAID
	65. Teaching support: equipment <ul style="list-style-type: none"> • Overhead projector • Transparency film – copier (box 100 sheets) • Specific purpose copier markers: black, blue, red, 	1 5 5	NDoH AusAID

	<ul style="list-style-type: none"> green Basic dressing sets: 2 kidney dishes 3 gallipots 3 dressing forceps 1 suture holder 1 pair dressing scissors 1 dressing tray Dressing consumables: suture needles and gut suture cutters sterile saline solution combine dressing packs bandages in three widths adhesives in three widths Pg. 104 	2 Usually in packs of 10	PHO Medical stores
Rank two – medium term implementation	66. Staff development to achieve an education qualification: <ul style="list-style-type: none"> Diploma of Education such as offered at University of Goroka OR Divine Word University Pg. 110 	1 school nominated	CHW School NDoH AusAID
	67. Specific purpose short courses for staff development <ul style="list-style-type: none"> Course evaluation and policy development: processes, benefits and implementation Pg. 103 	1 principal	CHW School NDoH AusAID
	68. Student clinical experience support, student held resources: <ul style="list-style-type: none"> Student stethoscope (1 per student) Student sphygmomanometer (1 per student) Clinical thermometers (2 per student) Pg. 104 	35 35 70	AusAID NDoH
	69. Student held Standard treatment books (1 per student) <ul style="list-style-type: none"> Paediatric Standard Treatment Book (8th Ed.) 2006 Obstetrics & Gynaecology Standard Treatment Book (6th Ed.) 2010 Standard Treatment for Common Illnesses of Adults in Papua New Guinea (4th Ed.) 2005 Pg. 104 	35 35 35	NDoH
	70. Teaching support: equipment <ul style="list-style-type: none"> White boards Resusi Anne adult manikin Basic dressing sets: 2 kidney dishes 3 gallipots 3 dressing forceps 1 suture holder 1 pair dressing scissors 1 dressing tray Dressing consumables: suture needles and gut suture cutters sterile saline solution combine dressing packs bandages in three widths adhesives in three widths Oroscope 	4 1 2 1	NDoH AusAID PHO Medical stores NDoH

Rank three – long term implementation	<p>71. Student clinical experience support, student held resources:</p> <ul style="list-style-type: none"> • Student stethoscope (1 per student) • Student sphygmomanometer (1 per student) • Clinical thermometers (2 per student) <p style="text-align: right;">Pg. 104</p>	<p>35 35 70</p>	<p>AusAID NDoH</p>
	<p>72. Student held Standard treatment books (1 per student)</p> <ul style="list-style-type: none"> • Paediatric Standard Treatment Book (8th Ed.) 2006 • Obstetrics & Gynaecology Standard Treatment Book (6th Ed.) 2010 • Standard Treatment for Common Illnesses of Adults in Papua New Guinea (4th Ed.) 2005 <p style="text-align: right;">Pg. 104</p>	<p>35 35 35</p>	<p>NDoH</p>
	<p>73. Teaching support: equipment</p> <ul style="list-style-type: none"> • 'Resusci baby' child manikin • Teaching stethoscopes <p style="text-align: right;">Pg. 104</p>	<p>1 3</p>	<p>AusAID</p>

8.5 CHW School: Lemakot Sacred Heart CHW School

Agency: Catholic Church

Overall assessment summary

Overall assessment of the ability of the Lemakot CHW School to implement the standard CHW curriculum is very good. In the opinion of the CHW audit team it ranks as one of the top three schools. Strengths of the school include a teaching staff comprised of members that hold a required health professional qualification as well as a teaching qualification. The clinical program is generally well planned.

Lemakot, as does each of the CHW schools, teaches the 'new' curriculum. This curriculum adopts a competency-based approach which the teachers described as one they liked. Implementation of the curriculum has added to the workload of the teachers and to the complexities of student assessments, particularly clinical assessments. Teachers at Lemakot have generally been able to assess students at the appropriate times, as suggested by the curriculum, and have been able to keep the clinical assessment records of the students up-to-date. There is need, however, for curriculum renewal as considerable amounts of content is now outdated. Staff specifically stated their need for refresher programs related to teaching methodologies that would improve the quality of their teaching activities.

The clinical placement environments visited by the audit staff appeared typical of the aid posts and health centres where students gain experience. The health centre explained its lack of medicines and other resources was because the goods had not arrived from government central stores from Kavieng. Staff liked going out on clinical placements but this willingness was probably related to their receiving an extra k100/week when out with students on placements. A major difficulty for the school when students are on clinical placements is that there is no permanent accommodation for students in the clinical areas. At the student meeting students stated that sometimes they lived in unhygienic conditions and students became ill.

When students are unable to proceed to clinical placements in the rural areas they spend more time at the Lemakot Health Centre. Although this is a very well institution which offers a range of experiences to the students its focus is on intervention rather than prevention. Students do attend that facility to gain experience with birthing women, experience that is often difficult to obtain in the rural areas because of its unpredictable nature.

Teaching facilities such as the library and demonstration room have some room for improvement. Staff commented that there is only one sink in the demonstration and that meant students took a long time to get the required practice. The library contains a selection of old texts. While the texts are catalogued there is no active system for students to borrow books.

Students going into the clinical areas are more likely to develop effective observation and diagnostic skills when they have access to basic clinical equipment such as a stethoscope and thermometers. For this reason, Lemakot has been equipping their students with personally held equipment that is used while on placements. This is a practice that is supported by the audit team as something that will improve the effectiveness of the CHW workforce in the long term.

The physical environments of the school including student and staff accommodations are reported separately. These facilities, particularly student accommodation, will limit possible increases in student numbers as they are barely adequate for existing students.

Implications for the future

While the Lemakot school is functioning very well, staff expressed concern about increases in student numbers. One of the major requirements would be additional teaching staff and there are currently noted difficulties in attracting appropriate persons to teach in the CHW system. This year Lemakot took no new students because of the unresolved industrial issue related to salary rates. It is anticipated that this matter is now resolved but the staff are adamant that if the matter is not resolved they will not take students in 2013.

One major consideration about the potential rise in student enrolments is the impact this will have on available space and teaching methodologies. The existing classrooms are adequate for current enrolment numbers but as student cohorts increase in size two major implications are possible. The first is that all students would not be accommodated in the existing classrooms that implies either two cohorts of students will need to be taught or larger classrooms are constructed. The impact on teaching methodologies is more serious. Given that a competency based approach is used teachers need to interact more intensively with each of the students to facilitate learning. Even with current student numbers of around 30 students per cohort this is difficult to do. When the number of students are increased it will mean multiple groups of students of a size that is possible for interaction, say a maximum of 26-30. This increase will mean multiple groups either running simultaneously with multiple teachers or different groups timetabled to attend class at different times. It will mean additional teachers whichever way this particular challenge is approached.

Staffing requirements: As stated in Community Health Worker Certificate Program (Part 1) (2001)

It is **recommended** that the staffing guidelines set out in the Community Health Worker Certificate Program (Part 1) (2001) document are implemented. These requirements identify the category of teaching staff required as well as teacher to student ratio that has been used in assessing staff required for current enrolment levels in each of the CWH schools. While teacher to student ratios at Lemakot are within the stated guidelines for their usual student number, Lemakot currently does not employ a clinical assessor as required by the above document. It needs to be noted that future expected increases in CHW student enrolment numbers will require additional staff.

While the salaries of CHW teaching staff are paid by the NDoH there is currently a considerable time lag of between six to twelve months before the name of the approved candidate is added to the payroll. All of Lemakot teachers are now on the payroll but when staff are increased there will be a time lag before new staff are added to the NDoH payroll. It is therefore **recommended** that AusAID consider supplementing the Lemakot CHW school budget for the amounts required for new teaching staff and that this supplementation continues until the name/s of the additional staff are added to the NDoH payroll.

In addition to teaching staff a **recommendation** has been made by the CHW principals group for secretarial support for principals.

Staff development:

The quality of a teaching institution is impacted on by the quality of its teaching staff. For example, there is an observed correlation between the school teaching staff members each holding a teaching qualification as well as their health qualification.

Health professional qualification

Each of the teaching staff holds a health professional qualification. Staff members who hold a CHW certificate do not have a route to a higher level qualification. Three of the staff hold a nursing qualification at diploma level and one at bachelor level. There is interest from staff in upgrading to a degree level qualification. There is currently no budget for the support of staff upgrading their qualification. It is therefore **recommended** that a nominated staff member annually be given opportunity for such an upgrade as there will be improvements in teaching quality as a result.

Education qualification:

Four teaching staff members currently employed at Lemakot have an education qualification. It is recommended that the remaining staff are given opportunity to complete a teaching qualification

Specific purpose short courses

The CHW audit found a range of areas where CHW teaching staff members need developmental assistance in order to better serve their school populations. Potential increases in student numbers will increase demands on teachers suggesting more acute need for these specific purpose workshops. Specific purpose short courses are **recommended**.

Student clinical experience supports:

Maximising the learning of students on clinical placements is facilitated when students each carry a small set of clinical equipment with them. Each of the students also carries, or is expected to carry a set of standard treatment books. These books guide the processes of care: diagnosis, care planning including prescription of required medications that are the basis of the CHW interventional practice. It is therefore **recommended** that the required standard treatment books are supplied.

Teaching resources:

Recommendation of library resources is limited by the age of the current CHW curriculum which contains a complete, and now out-of-date, list of required resources. These listed resources are those that will support teachers in their activities related to class preparation in the interim before curriculum renewal and are not viewed as those that would be freely accessed by students. Library cataloguing systems at Lemakot are not well developed with subsequent loss of texts when these become freely accessed.

Teaching equipment

The items listed in recommendations were identified by staff as being needed to improve teaching. The objects identified may not be held by the school or are old and not working.

Recommendations are given below for immediate, medium term and long term implementation.

Recommendations:

Rank one – short term implementation	74. Staffing recruitment to meet the requirements listed in the Community Health Worker Certificate Program (Part 1) (2001) includes: <ul style="list-style-type: none"> Clinical assessor with CHW or RN qualification 	1	CHW School NDoH AusAID
	75. Staffing recruitment to support principal in administrative activities of the school <ul style="list-style-type: none"> Secretarial assistant <p style="text-align: right;">Pg. 103</p>	1	CHW School NDoH AusAID
	76. Staff development to achieve qualification at higher professional level includes: <ul style="list-style-type: none"> Bachelor of Nursing course as offered by UPNG <p style="text-align: right;">Pg. 103</p>	1 school nominated	CHW School NDoH AusAID
	77. Staff development to achieve an education qualification: <ul style="list-style-type: none"> Diploma of Education such as offered at University of Goroka OR Divine Word University <p style="text-align: right;">Pg. 110</p>	1 school nominated	CHW School NDoH AusAID
	78. Specific purpose short courses for staff development <ul style="list-style-type: none"> Management processes: time, basic data processing and computing CHW school booking keeping / accounting Library resource management: procurement, cataloguing 	All staff members. Principal, secretarial assistant, curriculum implementer 1 staff member nominated by principal	CHW School NDoH AusAID
	79. Student clinical experience support, student held resources: <ul style="list-style-type: none"> Student stethoscope (1 per student) Student sphygmomanometer (1 per student) Clinical thermometers (2 per student) <p style="text-align: right;">Pg. 104</p>	35 35 70	AusAID NDoH
	80. Student held Standard treatment books (1 per student) <ul style="list-style-type: none"> Paediatric Standard Treatment Book (8th Ed.) 2006 Obstetrics & Gynaecology Standard Treatment Book (6th Ed.) 2010 Standard Treatment for Common Illnesses of Adults in Papua New Guinea (4th Ed.) 2005 <p style="text-align: right;">Pg. 104</p>	35 35 35	NDoH

Rank one – short term implementation	<p>81. Teaching support: new library resources</p> <ul style="list-style-type: none"> • Carter, P (2012), <i>Lippincott's textbook for nursing assistants: a humanistic approach to caregiving</i>. Williams & Wilkins Health: Philadelphia • Government of Papua New Guinea (2010), <i>National health plan 2011-2020 Back to basics</i>. Gov PNG: Port Moresby • Johnson, R (2010), <i>Skills for midwifery practice</i>. Churchill Livingstone: Edinburgh • McMurray, A (2010), <i>Community health & wellness: primary health care in practice</i>. Elsevier Australia: Chatswood NSW • Pairman, S. et al (2010) <i>Midwifery preparation for practice</i>. Elsevier: Chatswood NSW • Peate, I. & Nair, M (Eds.) (2011), <i>Fundamentals of anatomy and physiology for student nurses</i>. Wiley Blackwell: Chichester • Smith, B (2011), <i>Nursing care: an essential guide for nurses and health care workers in primary and secondary care</i>. Pearson Prentice Hall: Harlow • Watson, R (2011), <i>Anatomy and physiology for nurses</i>. Elsevier: Edinburgh <p style="text-align: right;">Pg. 104</p>	1 5 2 2 2 5 5 5	AusAID
	<p>82. Teaching support: equipment</p> <ul style="list-style-type: none"> • Overhead projector • Transparency film – copier (box 100 sheets) • Specific purpose copier markers: black, blue, red, green • Basic dressing sets: 2 kidney dishes 3 gallipots 3 dressing forceps 1 suture holder 1 pair dressing scissors 1 dressing tray • Hospital beds for demonstration room • Dressing consumables: suture needles and gut suture cutters sterile saline solution combine dressing packs bandages in three widths adhesives in three widths <p style="text-align: right;">Pg. 104</p>	1 5 5 2 2 Usually in packs of 10	NDoH AusAID PHO Medical stores
	<p>83. Staff development to achieve qualification at higher professional level includes:</p> <ul style="list-style-type: none"> • Bachelor of Nursing course as offered by UPNG OR Bachelor of Midwifery as offered at PAU <p style="text-align: right;">Pg. 110</p>	1 school nominated	CHW School NDoH AusAID
	<p>84. Specific purpose short courses for staff development</p> <ul style="list-style-type: none"> • Course evaluation and policy development: processes, benefits and implementation <p style="text-align: right;">Pg. 103</p>	1 principal	CHW School NDoH AusAID
<p>85. Student clinical experience support, student held resources:</p> <ul style="list-style-type: none"> • Student stethoscope (1 per student) 		AusAID	

	<ul style="list-style-type: none"> • Student sphygmomanometer (1 per student) • Clinical thermometers (2 per student) <p style="text-align: right;">Pg. 104</p>	35 35 70	NDoH
Rank two – medium term implementation	<p>86. Student held Standard treatment books (1 per student)</p> <ul style="list-style-type: none"> • Paediatric Standard Treatment Book (8th Ed.) 2006 • Obstetrics & Gynaecology Standard Treatment Book (6th Ed.) 2010 • Standard Treatment for Common Illnesses of Adults in Papua New Guinea (4th Ed.) 2005 <p style="text-align: right;">Pg. 104</p>	35 35 35	NDoH
	<p>87. Teaching support: equipment</p> <ul style="list-style-type: none"> • Staff computers • Basic procedures adult manikin • Basic dressing sets: 2 kidney dishes 3 gallipots 3 dressing forceps 1 suture holder 1 pair dressing scissors 1 dressing tray • Dressing consumables: suture needles and gut suture cutters sterile saline solution combine dressing packs bandages in three widths adhesives in three widths • Audiometer 	3 1 2 1	NDoH AusAID PHO Medical stores NDoH
Rank three – long term implementation	<p>88. Student clinical experience support, student held resources:</p> <ul style="list-style-type: none"> • Student stethoscope (1 per student) • Student sphygmomanometer (1 per student) • Clinical thermometers (2 per student) <p style="text-align: right;">Pg. 104</p>	35 35 70	AusAID NDoH
	<p>89. Student held Standard treatment books (1 per student)</p> <ul style="list-style-type: none"> • Paediatric Standard Treatment Book (8th Ed.) 2006 • Obstetrics & Gynaecology Standard Treatment Book (6th Ed.) 2010 • Standard Treatment for Common Illnesses of Adults in Papua New Guinea (4th Ed.) 2005 <p style="text-align: right;">Pg. 104</p>	35 35 35	NDoH
	<p>90. Teaching support: equipment</p> <ul style="list-style-type: none"> • 'Resusci baby' child manikin • Teaching stethoscopes <p style="text-align: right;">Pg. 104</p>	1 3	AusAID

8.6 CHW School: Onamuga

Agency: Salvation Army

Overall assessment summary

Overall assessment of the ability of the Onamuga CHW School to implement the standard CHW curriculum is fair. The most significant difficulty faced by Onamuga school is the unresolved matter of the school site. The school moved to the current site in Kainantu town in 2001 after repeated tribal fighting on the original Onamuga school and health care facilities site. A strength of the school is a teaching staff comprised of members who hold a required health professional qualification, one at bachelor level. Four of the five teaching staff also hold a teaching qualification. Maintaining an adequate teaching workforce is complicated by unresolved industrial matters with staff stating they will return to the clinical areas if the matter is unresolved. It should now have been resolved. The clinical program has some difficulties with clinical experience from a number of modules being compressed into one placement.

Onamuga, as does each of the CHW schools, teaches the 'new' curriculum. This curriculum adopts a competency-based approach. Implementation of the curriculum has added to the workload of the teachers and to the complexities of student assessments, particularly clinical assessments. Teachers use this increased workload as an argument for not visiting students while on their clinical placements. Teachers at Onamuga appear to have some difficulty in assessing the students' clinical work because of the practice stated above with time lags in recording the results of assessments in the clinical logbooks.

The clinical placement environments visited by the audit staff, the original Onamuga was seen, appeared typical of the aid posts and health centres where students gain experience. Students at the health centre visited appeared to be supervised adequately. Difficulty is experienced in getting students to their clinical placements.

While the Kainantu General Hospital is geographically close to the school there appears to be strained relationships between the two institutions. Students stated that they were not welcome there when unable to proceed to clinical placements in the rural areas.

Teaching facilities at the school are generally not highly conducive to learning. There is a room that is supposed to be a demonstration room but it appears to be used primarily as a storeroom. This supposed demonstration room has no handwashing facilities so students do not develop the crucial practice of handwashing before each attempt at a practical procedure, a habit that is essential for safe care in the clinical environments.

One of the difficulties of the current site caused by the shortage of land area is that there is no mess. Students are given a weekly allowance of k15, a very small sum, from which they are required to buy their food as well as any other life necessities. Students do not have the opportunity to grow food as there is no available land at the current site.

Students going into the clinical areas are more likely to develop effective observation and diagnostic skills when they have access to basic clinical equipment such as a stethoscope and thermometers. For this reason some of the better schools have been equipping their students with personally held equipment that is used while on placements. This is a practice that is supported by

the audit team as something that will improve the effectiveness of the CHW workforce in the long term.

The physical environments of the school including student and staff accommodations are reported separately. These facilities will limit possible increases in student numbers as they are barely adequate for existing students.

Implications for the future

The most significant matter facing the Onamuga school is the unresolved matter of the school site. In its current state it would be difficult to increase student number. It is the opinion of the CHW audit that the matter of school site needs to be resolved before significant expenditure of funds. While the Onamuga school has sufficient staff for its current student numbers, staff expressed concern about the impact of any increase in student numbers. One of the major requirements would be acquiring additional teaching staff because of the industrial difficulties referred to above. Ratios of teaching staff are determined by those listed in the current curriculum document and these would need to be maintained when student numbers increase.

One major consideration about the potential rise in student enrolments is the impact this will have on available space and teaching methodologies. The existing classrooms are barely adequate for current enrolment numbers. If student number increases all students taking the same module would not be accommodated in the same classroom which implies either two cohorts of students will need to be taught or larger classrooms are constructed and there is no space to construct additional classrooms. The impact on teaching methodologies is serious. Given that a competency based approach is used teachers need to interact more intensively with each of the students to facilitate learning. Even with current student numbers of around 25 students per cohort this is difficult to do. When the number of students are increased it will mean multiple groups of students of a size that is possible for interaction, say a maximum of 20-25. This increase will mean multiple groups either running simultaneously with multiple teachers or different groups timetabled to attend class at different times. It will mean additional teachers whichever way this particular challenge is approached.

Staffing requirements: As stated in Community Health Worker Certificate Program (Part 1) (2001)

It is **recommended** that the staffing guidelines set out in the Community Health Worker Certificate Program (Part 1) (2001) document are implemented. These requirements identify the category of teaching staff required as well as teacher to student ratio that has been used in assessing staff required for current enrolment levels in each of the CWH schools. While teacher to student ratios at Onamuga are within the stated guidelines, Onamuga currently does not employ a clinical assessor as required by the above document. It needs to be noted that future expected increases in CHW student enrolment numbers will require additional staff.

While the salaries of CHW teaching staff are paid by the NDoH there is currently a considerable time lag of between six to twelve months before the name of the approved candidate is added to the payroll. Onamuga has one such teacher who is yet to be on the NDoH payroll. It is therefore **recommended** that AusAID consider supplementing the Onamuga CHW school budget for the

amounts paid by them to staff not yet on the NDOH payroll and that this supplementation continue until the name/s of additional staff are added to the NDOH payroll.

In addition to teaching staff a **recommendation** has been made by the CHW principals group for secretarial support for principals.

Staff development:

The quality of a teaching institution is impacted on by the quality of its teaching staff. For example, there is an observed correlation between the school teaching staff members each holding a teaching qualification as well as their health qualification.

Health professional qualification

Each of the teaching staff holds a health professional qualification. Staff members who hold a CHW certificate do not have a route to a higher level qualification. Four of the staff hold a nursing qualification at diploma level and some are keen to upgrade to a degree level qualification. There is currently no budget for the support of staff upgrading their qualification. It is therefore **recommended** that a nominated staff member annually be given opportunity for such an upgrade as there will be improvements in teaching quality as a result.

Education qualification:

Four of the five currently employed teaching staff members at Onamuga have an education qualification. The remaining teacher should be given opportunity to take this qualification.

Specific purpose short courses

The CHW audit found a range of areas where CHW teaching staff members need developmental assistance in order to better serve their school populations. Potential increases in student numbers will increase demands on teachers suggesting more acute need for these specific purpose workshops. Specific purpose short courses are **recommended**.

Student clinical experience supports:

Transporting students to their clinical placements remains a major problem for Onamuga CHW School. The school currently uses one old Toyota Hilux to transport students. Students are piled into the back of the vehicle with their luggage and when it rains there is no plastic cover to throw over both passengers and goods. At times it takes multiple trips to get the students to their placements and the practice puts lives of students at considerable risk. Improved transport for students is therefore **recommended**.

Maximising the learning of students on clinical placements is facilitated when students each carry a small set of clinical equipment with them.

Student held resources

Each of the students also carries, or is expected to carry, a set of the standard treatment books. These books guide the processes of care: diagnosis, care planning including prescription of required

medications that are the basis of the CHW interventional practice. It is therefore **recommended** that the required standard treatment books are supplied.

Teaching resources:

Recommendation of library resources is limited by the age of the current CHW curriculum which contains a complete, and now out-of-date, list of required resources. These listed resources are those that will support teachers in their activities related to class preparation in the interim before curriculum renewal and are not viewed as those that would be freely accessed by students. Library cataloguing systems at Onamuga are poorly developed with subsequent loss of texts when these become freely accessed.

Teaching equipment

The following items were identified by staff as being needed to improve teaching. The objects identified may not be held by the school or are old and not working.

Recommendations are given for immediate, medium and long term implementation

Recommendations:

Rank one – immediate implementation	91. Staffing recruitment to meet the requirements listed in the Community Health Worker Certificate Program (Part 1) (2001) includes: <ul style="list-style-type: none"> Clinical assessor with CHW or RN qualification 	1	CHW School NDoH AusAID
	92. Staffing recruitment to support principal in administrative activities of the school <ul style="list-style-type: none"> Secretarial assistant <p style="text-align: right;">Pg. 103</p>	1	CHW School NDoH AusAID
	93. Staff development to achieve qualification at higher professional level includes: <ul style="list-style-type: none"> Bachelor of Nursing course as offered by UPNG <p style="text-align: right;">Pg. 103</p>	1 school nominated	CHW School NDoH AusAID
	94. Staff development to achieve an education qualification: <ul style="list-style-type: none"> Diploma of Education such as offered at University of Goroka OR Divine Word University <p style="text-align: right;">Pg. 110</p>	1 school nominated	CHW School NDoH AusAID
	95. Specific purpose short courses for staff development <ul style="list-style-type: none"> Management processes: time, basic data processing and computing CHW school booking keeping / accounting Library resource management: procurement, cataloguing 	All staff members. Principal, secretarial assistant, curriculum implementer 1 staff member nominated by	CHW School NDoH AusAID

		principal	
	96. Student clinical experience support: transport, 20 seater vehicle	1	AusAID
	97. Student clinical experience support, student held resources: <ul style="list-style-type: none"> • Student stethoscope (1 per student) • Student sphygmomanometer (1 per student) • Clinical thermometers (2 per student) Pg. 104	35 35 70	AusAID NDoH
	98. Student held Standard treatment books (1 per student) <ul style="list-style-type: none"> • Paediatric Standard Treatment Book (8th Ed.) 2006 • Obstetrics & Gynaecology Standard Treatment Book (6th Ed.) 2010 • Standard Treatment for Common Illnesses of Adults in Papua New Guinea (4th Ed.) 2005 Pg. 104	35 35 35	NDoH
	99. Teaching support: new library resources <ul style="list-style-type: none"> • Carter, P (2012), <i>Lippincott's textbook for nursing assistants: a humanistic approach to caregiving</i>. Williams & Wilkins Health: Philadelphia • Government of Papua New Guinea (2010), <i>National health plan 2011-2020 Back to basics</i>. Gov PNG: Port Moresby • Johnson, R (2010), <i>Skills for midwifery practice</i>. Churchill Livingstone: Edinburg • McMurray, A (2010), <i>Community health & wellness: primary health care in practice</i>. Elsevier Australia: Chatswood NSW • Pairman, S. et al (2010) <i>Midwifery preparation for practice</i>. Elsevier: Chatswood NSW • Peate, I. & Nair, M (Eds.) (2011), <i>Fundamentals of anatomy and physiology for student nurses</i>. Wiley Blackwell: Chichester • Smith, B (2011), <i>Nursing care: an essential guide for nurses and health care workers in primary and secondary care</i>. Pearson Prentice Hall: Harlow • Watson, R (2011), <i>Anatomy and physiology for nurses</i>. Elsevier: Edinburg Pg. 104	1 5 2 2 2 5 5 5	AusAID
	100. Teaching support: equipment <ul style="list-style-type: none"> • Overhead projector • Transparency film – copier (box 100 sheets) • Specific purpose copier markers: black, blue, red, green • Basic dressing sets: 2 kidney dishes 3 gallipots 3 dressing forceps 1 suture holder 1 pair dressing scissors 	2 5 5 2	NDoH AusAID

	<p>1 dressing tray</p> <ul style="list-style-type: none"> Dressing consumables: suture needles and gut suture cutters sterile saline solution combine dressing packs bandages in three widths adhesives in three widths Pg. 104 	Usually in packs of 10	PHO Medical stores
Rank two – medium term implementation	<p>101. Specific purpose short courses for staff development</p> <ul style="list-style-type: none"> Course evaluation and policy development: processes, benefits and implementation Pg. 103 	1 principal	CHW School NDoH AusAID
	<p>102. Student clinical experience support, student held resources:</p> <ul style="list-style-type: none"> Student stethoscope (1 per student) Student sphygmomanometer (1 per student) Clinical thermometers (2 per student) Pg. 104 	35 35 70	AusAID NDoH
	<p>103. Student held Standard treatment books (1 per student)</p> <ul style="list-style-type: none"> Paediatric Standard Treatment Book (8th Ed.) 2006 Obstetrics & Gynaecology Standard Treatment Book (6th Ed.) 2010 Standard Treatment for Common Illnesses of Adults in Papua New Guinea (4th Ed.) 2005 Pg. 104 	35 35 35	NDoH
	<p>104. Teaching support: equipment</p> <ul style="list-style-type: none"> Staff computers Basic procedures adult manikin Basic dressing sets: 2 kidney dishes 3 gallipots 3 dressing forceps 1 suture holder 1 pair dressing scissors 1 dressing tray Dressing consumables: suture needles and gut suture cutters sterile saline solution combine dressing packs bandages in three widths adhesives in three widths Audiometer Movable whiteboard Powerpoint projector 	3 1 2 1 2 1	NDoH AusAID PHO Medical stores NDoH
	<p>105. Student clinical experience support, student held resources:</p> <ul style="list-style-type: none"> Student stethoscope (1 per student) Student sphygmomanometer (1 per student) Clinical thermometers (2 per student) Pg. 104 	35 35 70	AusAID NDoH

Rank three – long term implementation	<p>106. Student held Standard treatment books (1 per student)</p> <ul style="list-style-type: none"> • Paediatric Standard Treatment Book (8th Ed.) 2006 • Obstetrics & Gynaecology Standard Treatment Book (6th Ed.) 2010 • Standard Treatment for Common Illnesses of Adults in Papua New Guinea (4th Ed.) 2005 <p style="text-align: right;">Pg. 104</p>	<p>35</p> <p>35</p> <p>35</p>	NDoH
	<p>107. Teaching support: equipment</p> <ul style="list-style-type: none"> • Basic procedures child manikin • Teaching stethoscopes <p style="text-align: right;">Pg. 104</p>	<p>1</p> <p>3</p>	AusAID

8.7 CHW School: Raihu

Agency: Catholic Church Diocese of Aitape

Overall assessment summary

Overall assessment of the ability of the Raihu CHW School to implement the standard CHW curriculum is very good with the school ranking in the top CHW schools visited by the audit team. Strengths of the school include a teaching staff comprised of members that hold a required health professional qualification. Two teachers hold a health qualification at bachelor level. Two staff currently also hold a teaching qualification. Staff stated that while they discussed the matters of quality improvement it remained nothing more than discussion because of lack of funds. The clinical program is generally well planned.

Raihu, as do each of the CHW schools, teaches the 'new' curriculum. This curriculum adopts a competency-based approach. Implementation of the curriculum has added to the workload of the teachers and to the complexities of student assessments, particularly clinical assessments. Teachers at Raihu have generally been able to assess students at the appropriate times, as suggested by the curriculum, and have been able to keep the clinical assessment records of the students up-to-date. There is need, however, for curriculum renewal as considerable amounts of content is now out dated.

The clinical placement environments visited by the audit staff appeared to be better than the average aid posts and health centres where students gain experience. Staff at the aide post stated they were happy to assess students' clinical skills and had been properly instructed in the use of the clinical assessment tools. Students go as far afield as the Sepik River to take their clinical placements and transporting students to these placements is a major expenditure for this school. Students, however, stated that their clinical placements allowed them to make the links between theory and practice.

Students also take some of the clinical experience in the Raihu Hospital where they are welcomed as 'they help to do the work'. While the hospital offers a range of experiences for CHW students the focus there is on intervention rather than prevention. One of the advantages of being located on the same campus as the hospital, however, is that specialist staff come to the CHW lessons for student teaching/learning of their related specialist areas such as the prevention/care of HIV Aids.

Teaching facilities such as the library and demonstration room are in need of improvement. The library is accommodated in the shared teacher space and while the books and leaflets are logically grouped there is not sufficient space for students to use these resources. There is a poorly equipped demonstration room.

Staff teaching some of the practical procedures currently borrow equipment from the hospital but this practice assumes that the hospital has enough equipment to lend to the school as well as being willing to do so. Other equipment such as manikins are old and in poor repair. Students were required to practice clinical skills in their own time to reduce the length of time equipment is out of the hospital but staff are concerned that students do not do this practice. Despite this concern the students stated that they felt well prepared for their placements.

Students going into the clinical areas are more likely to develop effective observation and diagnostic skills when they have access to basic clinical equipment such as a stethoscope and thermometers. For this reason some of the better schools have been equipping their students with

personally held equipment that is used while on placements. This is a practice that is supported by the audit team as something that will improve the effectiveness of the CHW workforce in the long term.

The physical environments of the school including student and staff accommodations are reported separately. These facilities will limit possible increases in student numbers as they are barely adequate for existing students.

Implications for the future

While the Raihu school is generally functioning very well, staff expressed concern about increases in student numbers. One of the major requirements would be additional teaching staff and there are currently noted difficulties in attracting appropriate persons to teach in the CHW system. Ratios of teaching staff are determined by those listed in the current curriculum document and these would need to be maintained when student numbers increase.

One major consideration about the potential rise in student enrolments is the impact this will have on available space and teaching methodologies. The existing classrooms are adequate for current enrolment numbers but as student cohorts increase in size two major implications are possible. It should also be noted that Raihu currently has only one group of students as it did not take a cohort in 2012. The school staff members were concerned about the implementation of the current curriculum and invited the NDoH to send person/s to observe the school. Representatives did attend but the school has not received feedback from that visit. The first impact of increasing student numbers is that all students would not be accommodated in the same classroom which implies either two cohorts of students will need to be taught or larger classrooms are constructed. The impact on teaching methodologies is more serious. Given that a competency based approach is used teachers need to interact more intensively with each of the students to facilitate learning. Even with current student numbers of up to 40 students per cohort this is difficult to do. When the number of students are increased it will mean multiple groups of students of a size that is possible for interaction, say a maximum of 26 particularly important when clinical skills are being taught and practiced. This increase will mean multiple groups either running simultaneously with multiple teachers or different groups timetabled to attend class at different times. It will mean additional teachers whichever way this particular challenge is approached.

Staffing requirements: As stated in Community Health Worker Certificate Program (Part 1) (2001)

It is **recommended** that the staffing guidelines set out in the Community Health Worker Certificate Program (Part 1) (2001) document are implemented. These requirements identify the category of teaching staff required as well as teacher to student ratio that has been used in assessing staff required for current enrolment levels in each of the CWH schools. Raihu currently has two vacant teacher positions and has had difficulty in attracting new staff because of the industrial matters related to salary rates. This matter should now be resolved. Gaubin currently does not employ a clinical assessor as required by the above document. It needs to be noted that future expected increases in CHW student enrolment numbers will require additional staff.

While the salaries of CHW teaching staff are paid by the NDoH there is currently a considerable time lag of between six to twelve months before the name of the approved candidate is added to the

payroll. Gaubin has one such teacher who is yet to be on the NDoH payroll. It is therefore **recommended** that AusAID consider supplementing the Gaubin CHW school budget for the amounts paid by them to staff not yet on the NDOH payroll and for any increase in teaching staff and that this supplementation continue until the name/s of the additional staff are added to the NDoH payroll.

In addition to teaching staff a **recommendation** has been made by the CHW principals group for secretarial support for principals.

Staff development:

The quality of a teaching institution is impacted on by the quality of its teaching staff. For example, there is an observed correlation between the school teaching staff members each holding a teaching qualification as well as their health qualification.

Health professional qualification

Each of the teaching staff holds a health professional qualification. Staff members who hold a CHW certificate do not have a route to a higher level qualification. One of the staff hold a nursing qualification at diploma level and is keen to upgrade to a degree level qualification. There is currently no budget for the support of staff upgrading their qualification. It is therefore **recommended** that a nominated staff member annually be given opportunity for such an upgrade as there will be improvements in teaching quality as a result.

Education qualification:

Two teachers currently employed at Gaubin have an education qualification. Staff are anxious to complete a teaching qualification as they recognise the importance of this qualification for quality teaching.

Specific purpose short courses

The CHW audit found a range of areas where CHW teaching staff members need developmental assistance in order to better serve their school populations. Potential increases in student numbers will increase demands on teachers suggesting more acute need for these specific purpose workshops. Specific purpose short courses are **recommended**.

Student clinical experience supports:

Maximising the learning of students on clinical placements is facilitated when students each carry a small set of clinical equipment with them.

Each of the students also carries, or is expected to carry, a set of the standard treatment books. These books guide the processes of care: diagnosis, care planning including prescription of required medications that are the basis of the CHW interventional practice. It is therefore **recommended** that the required standard treatment books are supplied.

Teaching resources:

Recommendation of library resources is limited by the age of the current CHW curriculum which contains a complete, and now out-of-date, list of required resources. These listed resources are those that will support teachers in their activities related to class preparation in the interim before curriculum renewal and are not viewed as those that would be freely accessed by students. Library cataloguing systems at Raihu are better than average but there is still risk of loss of texts when these become freely accessed.

Teaching equipment

The items listed in recommendations were identified by staff as being needed to improve teaching. The objects identified may not be held by the school or are old and not working. Raihu has a particular deficit in audio-visual equipment as all their equipment was recently stolen in a school break-in.

Recommendations are given below for immediate, medium and long term implementation.

Recommendations:

	<p>108. Staffing recruitment to meet the requirements listed in the Community Health Worker Certificate Program (Part 1) (2001) includes:</p> <ul style="list-style-type: none"> • Staff tutors • Clinical assessor with CHW or RN qualification 	<p>2 1</p>	<p>CHW School NDoH AusAID</p>
	<p>109. Staffing recruitment to support principal in administrative activities of the school</p> <ul style="list-style-type: none"> • Secretarial assistant <p style="text-align: right;">Pg. 103</p>	<p>1</p>	<p>CHW School NDoH AusAID</p>
	<p>110. Staff development to achieve qualification at higher professional level includes:</p> <ul style="list-style-type: none"> • Bachelor of Nursing course as offered by UPNG <p style="text-align: right;">Pg. 103</p>	<p>1 school nominated</p>	<p>CHW School NDoH AusAID</p>
	<p>111. Staff development to achieve an education qualification:</p> <ul style="list-style-type: none"> • Diploma of Education such as offered at University of Goroka OR Divine Word University <p style="text-align: right;">Pg. 110</p>	<p>1 school nominated</p>	<p>CHW School NDoH AusAID</p>
	<p>112. Specific purpose short courses for staff development</p> <ul style="list-style-type: none"> • Management processes: time, basic data processing and computing • CHW school booking keeping / accounting • Library resource management: procurement, cataloguing 	<p>All staff members. Principal, secretarial assistant, curriculum implementer 1 staff member nominated by</p>	<p>CHW School NDoH AusAID</p>

		principal	
Rank one – short term implementation	113. Student clinical experience support, student held resources: <ul style="list-style-type: none"> • Student stethoscope (1 per student) • Student sphygmomanometer (1 per student) • Clinical thermometers (2 per student) Pg. 104	40 40 80	AusAID NDoH
	114. Student held Standard treatment books (1 per student) <ul style="list-style-type: none"> • Paediatric Standard Treatment Book (8th Ed.) 2006 • Obstetrics & Gynaecology Standard Treatment Book (6th Ed.) 2010 • Standard Treatment for Common Illnesses of Adults in Papua New Guinea (4th Ed.) 2005 Pg. 104	40 40 40	NDoH
	115. Teaching support: new library resources <ul style="list-style-type: none"> • Carter, P (2012), <i>Lippincott's textbook for nursing assistants: a humanistic approach to caregiving</i>. Williams & Wilkins Health: Philadelphia • Government of Papua New Guinea (2010), <i>National health plan 2011-2020 Back to basics</i>. Gov PNG: Port Moresby • Johnson, R (2010), <i>Skills for midwifery practice</i>. Churchill Livingstone: Edinburg • McMurray, A (2010), <i>Community health & wellness: primary health care in practice</i>. Elsevier Australia: Chatswood NSW • Pairman, S. et al (2010) <i>Midwifery preparation for practice</i>. Elsevier: Chatswood NSW • Peate, I. & Nair, M (Eds.) (2011), <i>Fundamentals of anatomy and physiology for student nurses</i>. Wiley Blackwell: Chichester • Smith, B (2011), <i>Nursing care: an essential guide for nurses and health care workers in primary and secondary care</i>. Pearson Prentice Hall: Harlow • Watson, R (2011), <i>Anatomy and physiology for nurses</i>. Elsevier: Edinburg Pg. 104	1 5 2 2 2 5 5 5	AusAID
	116. Teaching support: equipment <ul style="list-style-type: none"> • Overhead projector • Transparency film – copier (box 100 sheets) • Specific purpose copier markers: black, blue, red, green • Powerpoint projector • Basic dressing sets: 2 kidney dishes 3 gallipots 3 dressing forceps 1 suture holder 1 pair dressing scissors 1 dressing tray 	2 5 5 1 2	NDoH AusAID

	<ul style="list-style-type: none"> Dressing consumables: suture needles and gut suture cutters sterile saline solution combine dressing packs bandages in three widths adhesives in three widths Pg. 104 	Usually in packs of 10	PHO Medical stores
Rank two – immediate implementation	117. Staff development to achieve an education qualification: <ul style="list-style-type: none"> Diploma of Education such as offered at University of Goroka OR Divine Word University 	School nominated teacher	AusAID
	118. Specific purpose short courses for staff development <ul style="list-style-type: none"> Course evaluation and policy development: processes, benefits and implementation Pg. 103 	1 principal	CHW School NDoH AusAID
	119. Student clinical experience support, student held resources: <ul style="list-style-type: none"> Student stethoscope (1 per student) Student sphygmomanometer (1 per student) Clinical thermometers (2 per student) Pg. 104 	35 35 70	AusAID NDoH
	120. Student held Standard treatment books (1 per student) <ul style="list-style-type: none"> Paediatric Standard Treatment Book (8th Ed.) 2006 Obstetrics & Gynaecology Standard Treatment Book (6th Ed.) 2010 Standard Treatment for Common Illnesses of Adults in Papua New Guinea (4th Ed.) 2005 Pg. 104 	35 35 35	NDoH
	121. Teaching support: equipment <ul style="list-style-type: none"> Staff computers Basic procedures adult manikin Basic dressing sets: 2 kidney dishes 3 gallipots 3 dressing forceps 1 suture holder 1 pair dressing scissors 1 dressing tray Dressing consumables: suture needles and gut suture cutters sterile saline solution combine dressing packs bandages in three widths adhesives in three widths Audiometer 	3 1 2 1	NDoH AusAID PHO Medical stores NDoH
	122. Student clinical experience support, student held resources: <ul style="list-style-type: none"> Student stethoscope (1 per student) Student sphygmomanometer (1 per student) Clinical thermometers (2 per student) Pg. 104 	40 40 80	AusAID NDoH

Rank three – long term implementation	<p>123. Student held Standard treatment books (1 per student)</p> <ul style="list-style-type: none"> • Paediatric Standard Treatment Book (8th Ed.) 2006 • Obstetrics & Gynaecology Standard Treatment Book (6th Ed.) 2010 • Standard Treatment for Common Illnesses of Adults in Papua New Guinea (4th Ed.) 2005 <p style="text-align: right;">Pg. 104</p>	<p>35</p> <p>35</p> <p>35</p>	NDoH
	<p>124. Teaching support: equipment</p> <ul style="list-style-type: none"> • Basic procedures child manikin • Teaching stethoscopes <p style="text-align: right;">Pg. 104</p>	<p>1</p> <p>3</p>	AusAID

8.8 CHW School: Rumginae

Agency: Evangelical Lutheran Church of Papua New Guinea

Overall assessment summary

Overall assessment of the ability of the Rumginae CHW School to implement the standard CHW curriculum is very good. Strengths of the school include a teaching staff comprised of members that hold a required health professional qualification. Staff identified the need for upgrading diploma level qualifications and also acknowledged the need for a midwife in the staff mix. All staff hold a teaching qualification, one at bachelor level. Remaining staff stated that they the need to upgrade their diploma level teaching qualifications to bachelor level. The clinical program is generally well planned. These comments from staff exemplify the progressive attitude held at the Rumginae school.

Rumginae, as does each of the CHW schools, teaches the 'new' curriculum. This curriculum adopts a competency-based approach and staff commented on preferring the 'wellness to illness' of its underlying curriculum philosophy. Implementation of the curriculum has added to the workload of the teachers and to the complexities of student assessments, particularly clinical assessments. Teachers at Rumginae have generally been able to assess students at the appropriate times, as suggested by the curriculum, and have been able to keep the clinical assessment records of the students up-to-date. There is need, however, for curriculum renewal as considerable amounts of content is now out-dated.

The clinical placement allowed the audit team to observe a class on a community health placement where they were constructing a pit latrine. These placements were viewed by the staff as significant because it encouraged community building. The school faces major difficulties when students go further afield. The first difficulty is getting the students to their placements which has been described by the staff as costly as the school needs to hire a bus each time students are to go on clinical placements. The second major difficulty is accommodating the students while they are in the clinical areas. There is some consideration of building purpose specific bush houses for the students but these do not have a long life span.

When students are unable to proceed to clinical placements in the rural areas they attend the Kiunga Hospital to gain experience. Some of the planned clinical placements are also taken at the Kiunga Hospital. While the hospital offers a range of experiences for CHW students the focus there is on intervention rather than prevention.

Teaching facilities such as the library and demonstration room are new. Although there is space for a library it does not function as such. Rumginae though had a staff member undertaking a two week library course at the time of the audit. Unlike some for the schools, Rumginae has purchased some books for the library but these are insufficient for demand from both teaching staff and student body. The proposed demonstration room is well sited in the school complex but there is no plumbing to the building so no handwashing facilities. As a result of lack of these students do not develop the crucial practice of handwashing before each attempt at a practical procedure, a habit that is essential for safe care in the clinical environments.

Staff teaching some of the practical procedures have enough equipment to demonstrate a limited number of procedures but there are insufficient sets for students to practice the procedure. Other equipment such as manikins are old and in poor repair. Students stated that they did not feel competent at the end of the two year candidature and wanted the course time extended. An

alternate practice sometimes used is that demonstrations of clinical skills are made outside of regular teaching hours when equipment may be more available from the hospital. These practices mean students and staff are engaged in learning activities outside of their regular hours. It also means that students do not feel well prepared when going on their placements, effective learning time while on clinical placements is not maximised and that patients attending the clinical facilities may be put at risk.

Students going into the clinical areas are more likely to develop effective observation and diagnostic skills when they have access to basic clinical equipment such as a stethoscope and thermometers. For this reason some of the better schools have been equipping their students with personally held equipment that is used while on placements. This is a practice that is supported by the audit team as something that will improve the effectiveness of the CHW workforce in the long term.

The physical environments of the school including student and staff accommodations are reported separately. These facilities will limit possible increases in student numbers as they are barely adequate for existing students.

Implications for the future

While the Rumginae school is generally functioning very well, staff expressed concern about increases in student numbers. One of the major requirements would be additional teaching staff and there are currently noted difficulties in attracting appropriate persons to teach in the CHW system. Ratios of teaching staff are determined by those listed in the current curriculum document and these would need to be maintained when student numbers increase.

One major consideration about the potential rise in student enrolments is the impact this will have on available space and teaching methodologies. The existing classrooms are adequate for current enrolment numbers but as student cohorts increase in size two major implications are possible. The first is that all students would not be accommodated in the existing one classroom which implies either two cohorts of students will need to be taught or larger classrooms are constructed. The impact on teaching methodologies is more serious. Given that a competency based approach is used teachers need to interact more intensively with each of the students to facilitate learning. Even with current student numbers of around 30 students per cohort this is difficult to do. When the number of students are increased it will mean multiple groups of students of a size that is possible for interaction, say a maximum of 26-30. This increase will mean multiple groups either running simultaneously with multiple teachers or different groups timetabled to attend class at different times. It will mean additional teachers whichever way this particular challenge is approached.

Staffing requirements: As stated in Community Health Worker Certificate Program (Part 1) (2001)

It is **recommended** that the staffing guidelines set out in the Community Health Worker Certificate Program (Part 1) (2001) document are implemented. These requirements identify the category of teaching staff required as well as teacher to student ratio that has been used in assessing staff required for current enrolment levels in each of the CWH schools. While teacher to student ratios at Rumginae are within the stated guidelines, Rumginae currently does not employ a clinical assessor

as required by the above document. It needs to be noted that future expected increases in CHW student enrolment numbers will require additional staff.

While the salaries of CHW teaching staff are paid by the NDoH there is currently a considerable time lag of between six to twelve months before the name of the approved candidate is added to the payroll. Rumginae has one such teacher who is yet to be on the NDoH payroll and has one vacant position. It is therefore **recommended** that AusAID consider supplementing the Rumginae CHW school budget for the amounts paid by them to staff not yet on the NDOH payroll and for any new teaching staff and that this supplementation continue until the name/s of the additional staff are added to the NDoH payroll.

In addition to teaching staff a **recommendation** has been made by the CHW principals group for secretarial support for principals.

Staff development:

The quality of a teaching institution is impacted on by the quality of its teaching staff. For example, there is an observed correlation between the school teaching staff members each holding a teaching qualification as well as their health qualification.

Health professional qualification

Each of the teaching staff holds a health professional qualification. Staff members who hold a CHW certificate do not have a route to a higher level qualification. Four of the staff hold a health qualification at diploma level and some are keen to upgrade to a degree level qualification. There is currently no budget for the support of staff upgrading their qualification. It is therefore **recommended** that a nominated staff member annually be given opportunity for such an upgrade as there will be improvements in teaching quality as a result.

Education qualification:

Four of the staff currently employed teaching staff members at Rumginae have an education qualification. One staff member is seeking to be upgraded.

Specific purpose short courses

The CHW audit found a range of areas where CHW teaching staff members need developmental assistance in order to better serve their school populations. Potential increases in student numbers will increase demands on teachers suggesting more acute need for these specific purpose workshops. Specific purpose short courses are **recommended**.

Student clinical experience supports:

Transporting students to their clinical placements remains a major problem for Rumginae CHW School. The school currently has one small vehicle but needs a larger one to take students out on

clinical placement rather than hire one each time it is needed. Improved transport for students is therefore **recommended**.

Maximising the learning of students on clinical placements is facilitated when students each carry a small set of clinical equipment with them.

Student held resources

Each of the students also carries, or is expected to carry, a set of the standard treatment books. These books guide the processes of care: diagnosis, care planning including prescription of required medications that are the basis of the CHW interventional practice. It is therefore **recommended** that the required standard treatment books are supplied.

Teaching resources:

Recommendation of library resources is limited by the age of the current CHW curriculum which contains a complete, and now out-of-date, list of required resources. These listed resources are those that will support teachers in their activities related to class preparation in the interim before curriculum renewal and are not viewed as those that would be freely accessed by students. Library cataloguing systems at Rumginae are not well developed with subsequent loss of texts when these become freely accessed.

Teaching equipment

The items listed in recommendations were identified by staff as being needed to improve teaching. The objects identified may not be held by the school or are old and not working.

Recommendations are given below for immediate, medium and long term implementation.

Recommendations:

	<p>125. Staffing recruitment to meet the requirements listed in the Community Health Worker Certificate Program (Part 1) (2001) include:</p> <ul style="list-style-type: none"> • Tutor with RN, CHW or HEO or EHO • clinical assessor with CHW or RN qualification <p style="text-align: right;">Pg. 103</p>	1	CHW School NDoH AusAID
	<p>126. Staffing recruitment to support principal in administrative activities of the school</p> <ul style="list-style-type: none"> • Secretarial assistant preferably with accounting experience <p style="text-align: right;">Pg. 103</p>	1	CHW School NDoH AusAID
	<p>127. Staff development to achieve qualification at higher professional level includes:</p> <ul style="list-style-type: none"> • Bachelor of Nursing course as offered by UPNG • Bachelor of Midwifery as offered at PAU 	1 school nominated	CHW School NDoH AusAID

	Pg. 103		
	128. Staff development to achieve an education qualification: <ul style="list-style-type: none"> Diploma of Education such as offered at University of Goroka OR Divine Word University Pg. 110	1 school nominated	CHW School NDoH AusAID
	129. Specific purpose short courses for staff development <ul style="list-style-type: none"> Management processes: time, basic data processing and computing CHW school booking keeping / accounting Library resource management: procurement, cataloguing 	All staff members. Principal, secretarial assistant, curriculum implementer 1 staff member nominated by principal	CHW School NDoH AusAID
	130. Student clinical experience support: transport, 20 seater vehicle Pg. 104	1	AusAID
	131. Student clinical experience support, student held resources: <ul style="list-style-type: none"> Student stethoscope (1 per student) Student sphygmomanometer (1 per student) Clinical thermometers (2 per student) Pg. 104	30 30 60	AusAID NDoH
	132. Student held Standard treatment books (1 per student) <ul style="list-style-type: none"> Paediatric Standard Treatment Book (8th Ed.) 2006 Obstetrics & Gynaecology Standard Treatment Book (6th Ed.) 2010 Standard Treatment for Common Illnesses of Adults in Papua New Guinea (4th Ed.) 2005 Pg. 104	30 30 30	NDoH
	133. Teaching support: new library resources <ul style="list-style-type: none"> Carter, P (2012), <i>Lippincott's textbook for nursing assistants: a humanistic approach to caregiving</i>. Williams & Wilkins Health: Philadelphia Government of Papua New Guinea (2010), <i>National health plan 2011-2020 Back to basics</i>. Gov PNG: Port Moresby Johnson, R (2010), <i>Skills for midwifery practice</i>. Churchill Livingstone: Edinburgh McMurray, A (2010), <i>Community health & wellness: primary health care in practice</i>. Elsevier Australia: Chatswood NSW Pairman, S. et al (2010) <i>Midwifery preparation for practice</i>. Elsevier: Chatswood NSW Peate, I. & Nair, M (Eds.) (2011), <i>Fundamentals of anatomy and physiology for student nurses</i>. Wiley Blackwell: Chichester 	1 5 2 2 2 5 5	AusAID

	<ul style="list-style-type: none"> Smith, B (2011), <i>Nursing care: an essential guide for nurses and health care workers in primary and secondary care</i>. Pearson Prentice Hall: Harlow Watson, R (2011), <i>Anatomy and physiology for nurses</i>. Elsevier: Edinburg <p>Pg. 104</p>	5	
Rank one – short term implementation	<p>134. Teaching support: equipment</p> <ul style="list-style-type: none"> Basic dressing sets: 2 kidney dishes 3 gallipots 3 dressing forceps 1 suture holder 1 pair dressing scissors 1 dressing tray Dressing consumables: suture needles and gut suture cutters sterile saline solution combine dressing packs bandages in three widths adhesives in three widths Reams of butcher paper <p>Pg. 104</p>	2 Usually in packs of 10 3	NDoH AusAID PHO Medical stores
Rank two – medium term implementation	<p>135. Staff development to achieve qualification at higher professional level includes:</p> <ul style="list-style-type: none"> Bachelor of Nursing course as offered by UPNG <p>Pg. 103</p>	1 school nominated	AusAID
	<p>136. Specific purpose short courses for staff development</p> <ul style="list-style-type: none"> Course evaluation and policy development: processes, benefits and implementation <p>Pg. 103</p>	1 principal	CHW School NDoH AusAID
	<p>137. Student clinical experience support, student held resources:</p> <ul style="list-style-type: none"> Student stethoscope (1 per student) Student sphygmomanometer (1 per student) Clinical thermometers (2 per student) <p>Pg. 104</p>	30 30 60	AusAID NDoH
	<p>138. Student held Standard treatment books (1 per student)</p> <ul style="list-style-type: none"> Paediatric Standard Treatment Book (8th Ed.) 2006 Obstetrics & Gynaecology Standard Treatment Book (6th Ed.) 2010 Standard Treatment for Common Illnesses of Adults in Papua New Guinea (4th Ed.) 2005 <p>Pg. 104</p>	30 30 30	NDoH
	<p>139. Teaching support: equipment</p> <ul style="list-style-type: none"> Staff computers Basic procedures adult manikin Basic dressing sets: 2 kidney dishes 3 gallipots 3 dressing forceps 1 suture holder 1 pair dressing scissors 1 dressing tray 	3 1 2	NDoH AusAID

	<ul style="list-style-type: none"> Dressing consumables: suture needles and gut suture cutters sterile saline solution combine dressing packs bandages in three widths adhesives in three widths Audiometer 	Usually in packs of 10 1	PHO Medical stores NDoH
Rank three – long term implementation	140. Student clinical experience support, student held resources: <ul style="list-style-type: none"> Student stethoscope (1 per student) Student sphygmomanometer (1 per student) Clinical thermometers (2 per student) Pg. 104	30 30 60	AusAID NDoH
	141. Student held Standard treatment books (1 per student) <ul style="list-style-type: none"> Paediatric Standard Treatment Book (8th Ed.) 2006 Obstetrics & Gynaecology Standard Treatment Book (6th Ed.) 2010 Standard Treatment for Common Illnesses of Adults in Papua New Guinea (4th Ed.) 2005 Pg. 104	30 30 30	NDoH
	142. Teaching support: equipment <ul style="list-style-type: none"> Basic procedures child manikin Teaching stethoscopes Pg. 104	1 3	AusAID

8.9 CHW School: Salamo

Agency: Papuan Islands Region United Church

Overall assessment summary

Overall assessment of the ability of the Salamo CHW School to is a school at risk. Even with its risks the school has strengths which include a teaching staff comprised of members that hold a required health professional qualification. The impression gained of the teaching staff is that of a group who are anxious to do their best.

Salamo, as do each of the CHW schools, teaches the 'new' curriculum. This curriculum adopts a competency-based approach. Implementation of the curriculum has added to the workload of the teachers and to the complexities of student assessments, particularly clinical assessments. Teachers at Salamo appear to have difficulty in clinically assessing students at the appropriate times, as suggested by the curriculum, and in keeping up-to-date records of the clinical assessments taken by the students. This difficulty means that students are coming to the end of their candidature without any recorded achievements from clinical assessments. Of all the staff groups, the Salamo teachers appear to most in need of developmental programs including those related to teaching methodologies. Even though the teaching staff is experienced with a mean teaching experience of 13.5 years none of the teachers hold a teaching diploma although one appears to hold a certificate.

The clinical placement environments visited by the audit staff appeared typical of the aid posts and health centres where students gain experience. When asked how they felt about assessing students' clinical competence the clinicians expressed reluctance stating that they did not understand the process or the assessment tool. Reasons given by the school for not preparing the clinicians were that some had been prepared but had left the clinical areas and that there was no budget for preparing other clinicians to assess students. As the school is located on an island there is difficulty getting students to their clinical placements as the school has neither boat nor wheeled transport.

When students are unable to proceed to clinical placements in the rural areas they attend the health centre located on the same campus as the school. One of the advantages of being located on the same campus as the health centre, however, is that specialist staff come to run the CHW lessons for students related specialist areas such as the prevention/care of HIV Aids.

Teaching facilities such as the library and demonstration room are in desperate need of improvement to bring the school to the required standard. A simple example, in the room that doubles as demonstration room there are no plumbed handwashing facilities so students do not develop the crucial practice of handwashing before each attempt at a practical procedure, a habit that is essential for safe care in the clinical environments.

Staff teaching some of the practical procedures currently borrow equipment from the health centre but this practice assumes that the hospital has enough equipment to lend to the school as well as being willing to do so. Other equipment such as manikins are old and in poor repair. Students stated that they often did not get a demonstration of a procedure and saw it for the first time when out in clinical practice. This meant an extended period of time in the clinical area before attempting the skill themselves with subsequent lack of time to refine their practical abilities.

Students going into the clinical areas are more likely to develop effective observation and diagnostic skills when they have access to basic clinical equipment such as a stethoscope and thermometers. For this reason some of the better schools have been equipping their students with

personally held equipment that is used while on placements. This is a practice that is supported by the audit team as something that will improve the effectiveness of the CHW workforce in the long term. Equipping the Salamo students would add to the potential of their developing better clinical skills in the practice environment.

The physical environments of the school including student and staff accommodations are reported separately. These facilities, particularly the women's dormitory, are generally substandard and will limit possible increases in student numbers as they are barely adequate for existing students. Students stated that some had no mattresses on their beds as the school did not provide this facility. It is strongly **recommended** that this school be brought up to a better standard before any increase in student numbers.

Implications for the future

With the Salamo school generally functioning at a level that does not serve students well, staff expressed concern about increases in student numbers. One of the major requirements would be additional teaching staff and there are currently noted difficulties in attracting appropriate persons to teach in the CHW system. Ratios of teaching staff are determined by those listed in the current curriculum document and these would need to be maintained when student numbers increase.

One major consideration about the potential rise in student enrolments is the impact this will have on available space and teaching methodologies. The existing classrooms and resources are barely adequate for current enrolment numbers but as student cohorts increase in size two major implications are possible. The first is that all students would not be accommodated in the same classroom because of classroom size which implies either two cohorts of students will need to be taught or larger classrooms are constructed. The impact on teaching methodologies is more serious. Given that a competency based approach is used teachers need to interact more intensively with each of the students to facilitate learning. Even with current student numbers of between 25 and 30 students per cohort this is difficult to do. When the number of students are increased it will mean multiple groups of students of a size that is possible for interaction, say a maximum of 26. This increase will mean multiple groups either running simultaneously with multiple teachers or different groups timetabled to attend class at different times. It will mean additional teachers whichever way this particular challenge is approached.

Staffing requirements: As stated in Community Health Worker Certificate Program (Part 1) (2001)

It is **recommended** that the staffing guidelines set out in the Community Health Worker Certificate Program (Part 1) (2001) document are implemented. These requirements identify the category of teaching staff required as well as teacher to student ratio that has been used in assessing staff required for current enrolment levels in each of the CWH schools. While teacher to student ratios at Salamo are within the stated guidelines, the school claims it has one unfilled tutor position. Salamo currently does not employ a clinical assessor as required by the above document. It needs to be noted that any future increases in CHW student enrolment numbers will require additional staff.

While the salaries of CHW teaching staff are paid by the NDoH there is currently a considerable time lag of between six to twelve months before the name of the approved candidate is added to the payroll. Salamo does not have any teacher in this position, however, it needs to employ a clinical

assessor with potential time lag in that name being added to the NDoH payroll. It is therefore **recommended** that AusAID consider supplementing the Salamo CHW school budget for the amounts paid by them any new teaching staff and that this supplementation continues until the name/s of the additional staff are added to the NDoH payroll.

In addition to teaching staff a **recommendation** has been made by the CHW principals group for secretarial support for principals.

Staff development:

The quality of a teaching institution is impacted on by the quality of its teaching staff. For example, there is an observed correlation between the school teaching staff members each holding a teaching qualification as well as their health qualification.

Health professional qualification

Each of the teaching staff holds a health professional qualification. Staff members who hold a CHW certificate do not have a route to a higher level qualification. Three staff hold a nursing qualification at diploma level and some are keen to upgrade to a degree level qualification. There is currently no budget for the support of staff upgrading their qualification. It is therefore **recommended** that a nominated staff member annually be given opportunity for such an upgrade as there will be improvements in teaching quality as a result.

Education qualification:

No currently employed teaching staff member at Salamo has an education qualification at diploma level. Given the acute need of the school to improve the quality of educational practices it is strongly **recommended** that a funded opportunity is given for staff to obtain an education qualification.

Specific purpose short courses

The CHW audit found a range of areas where CHW teaching staff members need developmental assistance, including time management, in order to better serve their school populations. Potential increases in student numbers will increase demands on teachers suggesting more acute need for these specific purpose workshops. Specific purpose short courses are **recommended**.

Student clinical experience supports:

Transporting students to their clinical placements remains a major problem for Salamo CHW School. The school currently has no car or canoe and when students are taken to clinical placements transport has to be hired. This practice adds significant cost to the school. Improved transport for students is therefore **recommended**.

Maximising the learning of students on clinical placements is facilitated when students each carry a small set of clinical equipment with them.

Student held resources

Each of the students also carries, or is expected to carry, a set of the standard treatment books. These books guide the processes of care: diagnosis, care planning including prescription of required medications that are the basis of the CHW interventional practice. It is therefore **recommended** that the required standard treatment books are supplied.

Teaching resources:

The Salamo school has been unable to purchase any new resources for its library which is poorly resourced and organised with staff relying on out-of-date texts. **Recommendation** of the following resources is limited by the age of the current CHW curriculum which contains a complete, and now out-of-date, list of required resources. These listed resources are those that will support teachers in their activities related to class preparation in the interim before curriculum renewal and are not viewed as those that would be freely accessed by students. Library cataloguing systems at Salamo are not developed with subsequent loss of texts when these become freely accessed.

Teaching equipment

The following items were identified by staff as being needed to improve teaching. The objects identified may not be held by the school or are old and not working.

Recommendations are given below for immediate, medium and long term implementation.

Recommendations:

	<p>143. Staffing recruitment to meet the requirements listed in the Community Health Worker Certificate Program (Part 1) (2001) include:</p> <ul style="list-style-type: none"> • Tutor with RN, CHW or HEO or EHO • clinical assessor with CHW or RN qualification <p style="text-align: right;">Pg. 103</p>	1	CHW School NDoH AusAID
	<p>144. Staffing recruitment to support principal in administrative activities of the school</p> <ul style="list-style-type: none"> • Secretarial assistant preferably with accounting experience <p style="text-align: right;">Pg. 103</p>	1	CHW School NDoH AusAID
	<p>145. Staff development to achieve qualification at higher professional level includes:</p> <ul style="list-style-type: none"> • Bachelor of Nursing course as offered by UPNG • Bachelor of Midwifery as offered at PAU <p style="text-align: right;">Pg. 103</p>	1 school nominated	CHW School NDoH AusAID
	<p>146. Staff development to achieve an education qualification:</p> <ul style="list-style-type: none"> • Diploma of Education such as offered at University of Goroka OR Divine Word University <p style="text-align: right;">Pg. 110</p>	1 school nominated	CHW School NDoH AusAID
	<p>147. Specific purpose short courses for staff development</p> <ul style="list-style-type: none"> • Management processes: time, basic data processing 	All staff members.	CHW School NDoH

<p>and computing (time management a particular problem at Salamo)</p> <ul style="list-style-type: none"> • CHW school booking keeping / accounting • Library resource management: procurement, cataloguing 	<p>Principal, secretarial assistant, curriculum implementer 1 staff member nominated by principal</p>	<p>AusAID</p>
<p>148. Student clinical experience support: transport, motorised 'banana boat'</p> <p style="text-align: right;">Pg. 104</p>	<p>1</p>	<p>AusAID</p>
<p>149. Student clinical experience support, student held resources:</p> <ul style="list-style-type: none"> • Student stethoscope (1 per student) • Student sphygmomanometer (1 per student) • Clinical thermometers (2 per student) <p style="text-align: right;">Pg. 104</p>	<p>30 30 60</p>	<p>AusAID NDoH</p>
<p>150. Student held Standard treatment books (1 per student)</p> <ul style="list-style-type: none"> • Paediatric Standard Treatment Book (8th Ed.) 2006 • Obstetrics & Gynaecology Standard Treatment Book (6th Ed.) 2010 • Standard Treatment for Common Illnesses of Adults in Papua New Guinea (4th Ed.) 2005 <p style="text-align: right;">Pg. 104</p>	<p>30 30 30</p>	<p>NDoH</p>
<p>151. Teaching support: new library resources</p> <ul style="list-style-type: none"> • Carter, P (2012), <i>Lippincott's textbook for nursing assistants: a humanistic approach to caregiving</i>. Williams & Wilkins Health: Philadelphia • Government of Papua New Guinea (2010), <i>National health plan 2011-2020 Back to basics</i>. Gov PNG: Port Moresby • Johnson, R (2010), <i>Skills for midwifery practice</i>. Churchill Livingstone: Edinburg • McMurray, A (2010), <i>Community health & wellness: primary health care in practice</i>. Elsevier Australia: Chatswood NSW • Pairman, S. et al (2010) <i>Midwifery preparation for practice</i>. Elsevier: Chatswood NSW • Peate, I. & Nair, M (Eds.) (2011), <i>Fundamentals of anatomy and physiology for student nurses</i>. Wiley Blackwell: Chichester • Smith, B (2011), <i>Nursing care: an essential guide for nurses and health care workers in primary and secondary care</i>. Pearson Prentice Hall: Harlow • Watson, R (2011), <i>Anatomy and physiology for nurses</i>. Elsevier: Edinburg <p style="text-align: right;">Pg. 104</p>	<p>1 5 2 2 2 5 5 5</p>	<p>AusAID</p>

Rank one – short term implementation	<p>152. Teaching support: equipment</p> <ul style="list-style-type: none"> Overhead projector Transparency film – copier (box 100 sheets) Set of specific purpose copier markers: blue, black, green, red <p>2 5 5</p> <ul style="list-style-type: none"> Basic dressing sets: 2 kidney dishes 3 gallipots 3 dressing forceps 1 suture holder 1 pair dressing scissors 1 dressing tray <p>2</p> <ul style="list-style-type: none"> Dressing consumables: suture needles and gut suture cutters sterile saline solution combine dressing packs bandages in three widths adhesives in three widths <p>Usually in packs of 10</p> <ul style="list-style-type: none"> Reams of butcher paper <p>3</p> <p>Pg. 104</p>		<p>NDoH AusAID</p> <p>PHO Medical stores</p>
Rank two – medium term implementation	<p>153. Staff development to achieve qualification at higher professional level includes:</p> <ul style="list-style-type: none"> Bachelor of Nursing course as offered by UPNG <p>Pg. 103</p>	1 school nominated	AusAID
	<p>154. Staff development to achieve an education qualification:</p> <ul style="list-style-type: none"> Diploma of Education such as offered at University of Goroka OR Divine Word University 	1 school nominated teacher	CHW School NDoH AusAID
	<p>155. Specific purpose short courses for staff development</p> <ul style="list-style-type: none"> Course evaluation and policy development: processes, benefits and implementation <p>Pg. 103</p>	1 principal	CHW School NDoH AusAID
	<p>156. Student clinical experience support, student held resources:</p> <ul style="list-style-type: none"> Student stethoscope (1 per student) Student sphygmomanometer (1 per student) Clinical thermometers (2 per student) <p>Pg. 104</p>	30 30 60	AusAID NDoH
	<p>157. Student held Standard treatment books (1 per student)</p> <ul style="list-style-type: none"> Paediatric Standard Treatment Book (8th Ed.) 2006 Obstetrics & Gynaecology Standard Treatment Book (6th Ed.) 2010 Standard Treatment for Common Illnesses of Adults in Papua New Guinea (4th Ed.) 2005 <p>Pg. 104</p>	30 30 30	NDoH
	<p>158. Teaching support: equipment</p> <ul style="list-style-type: none"> Staff computers Basic procedures adult manikin Basic dressing sets: 2 kidney dishes 3 gallipots 3 dressing forceps 1 suture holder 1 pair dressing scissors 	3 1 2	NDoH AusAID

	<p>1 dressing tray</p> <ul style="list-style-type: none"> Dressing consumables: suture needles and gut suture cutters sterile saline solution combine dressing packs bandages in three widths adhesives in three widths Audiometer 	<p>Usually in packs of 10</p> <p>1</p>	<p>PHO Medical stores</p> <p>NDoH</p>
Rank three – long term implementation	<p>159. Student clinical experience support, student held resources:</p> <ul style="list-style-type: none"> Student stethoscope (1 per student) Student sphygmomanometer (1 per student) Clinical thermometers (2 per student) <p>Pg. 104</p>	<p>30</p> <p>30</p> <p>60</p>	<p>AusAID</p> <p>NDoH</p>
	<p>160. Student held Standard treatment books (1 per student)</p> <ul style="list-style-type: none"> Paediatric Standard Treatment Book (8th Ed.) 2006 Obstetrics & Gynaecology Standard Treatment Book (6th Ed.) 2010 Standard Treatment for Common Illnesses of Adults in Papua New Guinea (4th Ed.) 2005 <p>Pg. 104</p>	<p>30</p> <p>30</p> <p>30</p>	<p>NDoH</p>
	<p>161. Teaching support: equipment</p> <ul style="list-style-type: none"> Basic procedures child manikin Teaching stethoscopes <p>Pg. 104</p>	<p>1</p> <p>3</p>	<p>AusAID</p>

8.10 CHW School: St Margaret's

Agency: Anglican Church

Overall assessment summary

Overall assessment of the ability of the St Margaret's CHW School to implement the standard CHW curriculum is fairly good. Strengths of the school include an enthusiastic teaching staff comprised of members that hold a required health professional qualification as well as a teaching qualification whose work is made difficult by a poor physical environment. The clinical program is generally well planned with St Margaret's being the only CHW to employ a clinical assessor. Students may have difficulty in going to their clinical placement because of the problems with transport, difficulties that at times saw students walking with their goods because the road had become impassable.

St Margaret's, as does each of the CHW schools, teaches the 'new' curriculum. This curriculum adopts a competency-based approach. Implementation of the curriculum has added to the workload of the teachers and to the complexities of student assessments, particularly clinical assessments. Teachers at St Margaret's have generally been able to assess students at the appropriate times, as suggested by the curriculum, and have been able to keep the clinical assessment records of the students up-to-date for the most part. The activities relate to the clinical assessment of students has been made more difficult by clinically staff leaving and new staff arriving each of which needs to be directed in the processes of clinical assessment.

The clinical placement environments visited by the audit staff appeared typical of the aid posts and health centres where students gain experience. Two major difficulties are faced by the school when its students are on their clinical placements. The first is getting the students to their placements. When the weather turns bad and roads become impassable a clinical placement may be cancelled to be offered at a later including weekend work. The second is accommodating the students while they are in the clinical areas as dedicated student accommodation only is available in Oro Bay. Students who do not complete the assessments related to a specific module are given additional time which adds to per unit costs incurred by the school, cost which are not recorded.

When students are unable to proceed to clinical placements in the rural areas they attend the Popondetta Hospital to gain experience. While the hospital offers a range of experiences for CHW students the focus there is on intervention rather than prevention. One of the advantages of being located on the same campus as the hospital, however, is that specialist staff come to the CHW lessons for student teaching/learning of their related specialist areas such as the prevention/care of HIV Aids.

Teaching facilities such as the library and demonstration room are in need of improvement to bring the school to the required standard. A simple example, there is only one classroom at the school and when more than one group of students are scheduled for classes at the same time the school needs to gain permission to use a meeting room in the church facilities. There is no demonstration room. Staff teaching some of the practical procedures currently borrow equipment from the hospital but this practice assumes that the hospital has enough equipment to lend to the school as well as being willing to do so. Other equipment such as manikins are old and in poor repair.

An alternate practice sometimes used is that demonstrations of clinical skills are made outside of regular teaching hours when equipment may be more available from the hospital. These practices mean students and staff are engaged in learning activities outside of their regular hours. It also means that students sometimes do not feel well prepared when going on their placements, effective learning time while on clinical placements is not maximised and that patients attending the clinical facilities may be put at risk.

Students going into the clinical areas are more likely to develop effective observation and diagnostic skills when they have access to basic clinical equipment such as a stethoscope and thermometers. For this reason some of the better schools have been equipping their students with personally held equipment that is used while on placements. This is a practice that is supported by the audit team as something that will improve the effectiveness of the CHW workforce in the long term.

The physical environments of the school including student and staff accommodations are reported separately. These facilities currently limit the effectiveness of a dedicated teaching staff and reduce possible increases in student numbers as these are barely adequate for existing students.

Implications for the future

While the St Margaret's school is generally functioning well, staff expressed concern about increases in student numbers. One of the major requirements would be additional teaching staff and there are currently noted difficulties in attracting appropriate persons to teach in the CHW system. St Margaret's know of possible teachers but these are reluctant to come because of the pay scales that were in place at the time of the audit. Ratios of teaching staff are determined by those listed in the current curriculum document and these would need to be maintained when student numbers increase.

One major consideration about the potential rise in student enrolments is the impact this will have on available space and teaching methodologies. The existing classroom is absolutely inadequate for current enrolment numbers and as student cohorts increase in size two major implications are possible. The first is that all students would not be accommodated in the existing one classroom which implies either two cohorts of students will need to be taught or larger classrooms are constructed. The impact on teaching methodologies is more serious. Given that a competency based approach is used teachers need to interact more intensively with each of the students to facilitate learning. Even with current student numbers of around 25 students per cohort this is difficult to do. When the number of students are increased it will mean multiple groups of students of a size that is possible for interaction, say a maximum of 25. This increase will mean multiple groups either running simultaneously with multiple teachers or different groups timetabled to attend class at different times. It will mean additional teachers as well as additional classrooms whichever way this particular challenge is approached.

Staffing requirements: As stated in Community Health Worker Certificate Program (Part 1) (2001)

It is **recommended** that the staffing guidelines set out in the Community Health Worker Certificate Program (Part 1) (2001) document are implemented. These requirements identify the category of teaching staff required as well as teacher to student ratio that has been used in assessing staff

required for current enrolment levels in each of the CHW schools. While teacher to student ratios at St Margaret's are within the stated guidelines fewer than usual students are currently enrolled and the principal stated there is one unfilled tutor position. St Margaret's currently employs a clinical assessor. It needs to be noted that future expected increases in CHW student enrolment numbers will require additional staff.

While the salaries of CHW teaching staff are paid by the NDoH there is currently a considerable time lag of between six to twelve months before the name of the approved candidate is added to the payroll. It is therefore **recommended** that AusAID consider supplementing the St Margaret's CHW school budget for the amounts paid by them to newly employed staff as they wait for their names to be added to the NDOH payroll and that this supplementation continue until the name/s of the additional staff are added to the NDoH payroll.

In addition to teaching staff a **recommendation** has been made by the CHW principals group for secretarial support for principals.

Staff development:

The quality of a teaching institution is impacted on by the quality of its teaching staff. For example, there is an observed correlation between the school teaching staff members each holding a teaching qualification as well as their health qualification.

Health professional qualification

Each of the teaching staff holds a health professional qualification. Staff members who hold a CHW certificate do not have a route to a higher level qualification. Two staff members hold a nursing qualification at degree level with plans for upgrading other teachers' qualifications in existence. However, there is currently no dedicated budget for the support of staff upgrading their qualification. It is therefore **recommended** that a nominated staff member annually be given opportunity for such an upgrade as there will be improvements in teaching quality as a result.

Education qualification:

All currently employed teaching staff members at St Margaret's except the clinical assessor have an education qualification. One staff member is currently enrolled at the University of Goroka and should complete in 2012.

Specific purpose short courses

The CHW audit found a range of areas where CHW teaching staff members need developmental assistance in order to better serve their school populations. Potential increases in student numbers will increase demands on teachers suggesting more acute need for these specific purpose workshops. Specific purpose short courses are **recommended**.

Student clinical experience supports:

Transporting students to their clinical placements remains a major problem for St Margaret's CHW School. The school currently has one old Toyota Hilux and one bus to transport students. Neither of these vehicles is able to negotiate the rough roads into Kokoda where students need to take

placements. Some students take a local boat to their placements. At present the vehicle being used will go as far as possible and then students will walk until reaching their placement. Students need to carry everything they potentially require for the length of their placement. Improved transport for students is therefore **recommended**.

Student held resources

Maximising the learning of students on clinical placements is facilitated when students each carry a small set of clinical equipment with them.

Each of the students also carries, or is expected to carry, a set of the standard treatment books. These books guide the processes of care: diagnosis, care planning including prescription of required medications that are the basis of the CHW interventional practice. It is therefore **recommended** that the required standard treatment books are supplied.

Teaching resources:

Recommendation of library resources is limited because of the age of the current CHW curriculum which contains a complete, and now out-of-date, list of required resources. These listed resources are those that will support teachers in their activities related to class preparation in the interim before curriculum renewal and are not viewed as those that would be freely accessed by students. Library cataloguing systems at St Margaret's are not well developed with subsequent loss of texts when these become freely accessed.

Teaching equipment

The items listed in recommendations were identified by staff as being needed to improve teaching. The objects identified may not be held by the school or are old and not working.

Recommendations are given below for immediate, medium and long term implementation.

Recommendations:

	<p>162. Staffing recruitment to meet the requirements listed in the Community Health Worker Certificate Program (Part 1) (2001) include:</p> <ul style="list-style-type: none"> • Tutor with RN, CHW or HEO or EHO <p>Pg. 103</p>	1	CHW School NDoH AusAID
	<p>163. Staffing recruitment to support principal in administrative activities of the school</p> <ul style="list-style-type: none"> • Secretarial assistant preferably with accounting experience <p>Pg. 103</p>	1	CHW School NDoH AusAID
	<p>164. Staff development to achieve qualification at higher professional level includes:</p> <ul style="list-style-type: none"> • Bachelor of Nursing course as offered by UPNG, OR • Bachelor of Midwifery as offered at PAU <p>Pg. 103</p>	1 school nominated	CHW School NDoH AusAID

<p>165. Specific purpose short courses for staff development</p> <ul style="list-style-type: none"> • Management processes: time, basic data processing and computing (time management a particular problem at Salamo) • CHW school booking keeping / accounting • Library resource management: procurement, cataloguing 	<p>All staff members. Principal, secretarial assistant, curriculum implementer 1 staff member nominated by principal</p>	<p>CHW School NDoH AusAID</p>
<p>166. Student clinical experience support: transport 4 wheel drive vehicle</p> <p style="text-align: right;">Pg. 104</p>	<p>1</p>	<p>AusAID</p>
<p>167. Student clinical experience support, student held resources:</p> <ul style="list-style-type: none"> • Student stethoscope (1 per student) • Student sphygmomanometer (1 per student) • Clinical thermometers (2 per student) <p style="text-align: right;">Pg. 104</p>	<p>30 30 60</p>	<p>AusAID NDoH</p>
<p>168. Student held Standard treatment books (1 per student)</p> <ul style="list-style-type: none"> • Paediatric Standard Treatment Book (8th Ed.) 2006 • Obstetrics & Gynaecology Standard Treatment Book (6th Ed.) 2010 • Standard Treatment for Common Illnesses of Adults in Papua New Guinea (4th Ed.) 2005 <p style="text-align: right;">Pg. 104</p>	<p>30 30 30</p>	<p>NDoH</p>
<p>169. Teaching support: new library resources</p> <ul style="list-style-type: none"> • Carter, P (2012), <i>Lippincott's textbook for nursing assistants: a humanistic approach to caregiving</i>. Williams & Wilkins Health: Philadelphia • Government of Papua New Guinea (2010), <i>National health plan 2011-2020 Back to basics</i>. Gov PNG: Port Moresby • Johnson, R (2010), <i>Skills for midwifery practice</i>. Churchill Livingstone: Edinburg • McMurray, A (2010), <i>Community health & wellness: primary health care in practice</i>. Elsevier Australia: Chatswood NSW • Pairman, S. et al (2010) <i>Midwifery preparation for practice</i>. Elsevier: Chatswood NSW • Peate, I. & Nair, M (Eds.) (2011), <i>Fundamentals of anatomy and physiology for student nurses</i>. Wiley Blackwell: Chichester • Smith, B (2011), <i>Nursing care: an essential guide for nurses and health care workers in primary and secondary care</i>. Pearson Prentice Hall: Harlow • Watson, R (2011), <i>Anatomy and physiology for nurses</i>. Elsevier: Edinburg 	<p>1 5 2 2 2 5 5 5</p>	<p>AusAID</p>

	Pg. 104		
Rank one – immediate implementation	<p>170. Teaching support: equipment</p> <ul style="list-style-type: none"> Overhead projector Transparency film – copier (box 100 sheets) Set of specific purpose copier markers: blue, black, green, red <p>Basic dressing sets: 2 kidney dishes 3 gallipots 3 dressing forceps 1 suture holder 1 pair dressing scissors 1 dressing tray</p> <ul style="list-style-type: none"> Dressing consumables: suture needles and gut suture cutters sterile saline solution combine dressing packs bandages in three widths adhesives in three widths <p>Reams of butcher paper</p> <p>Pg. 104</p>	<p>2</p> <p>5</p> <p>5</p> <p>2</p> <p>Usually in packs of 10</p> <p>3</p>	<p>NDoH AusAID</p> <p>PHO Medical stores</p>
Rank two – medium term implementation	<p>171. Staff development to achieve qualification at higher professional level includes:</p> <ul style="list-style-type: none"> Bachelor of Nursing course as offered by UPNG <p>Pg. 103</p>	1 school nominated	AusAID
	<p>172. Specific purpose short courses for staff development</p> <ul style="list-style-type: none"> Course evaluation and policy development: processes, benefits and implementation <p>Pg. 103</p>	1 principal	CHW School NDoH AusAID
	<p>173. Student clinical experience support, student held resources:</p> <ul style="list-style-type: none"> Student stethoscope (1 per student) Student sphygmomanometer (1 per student) Clinical thermometers (2 per student) <p>Pg. 104</p>	<p>30</p> <p>30</p> <p>60</p>	<p>AusAID</p> <p>NDoH</p>
	<p>174. Student held Standard treatment books (1 per student)</p> <ul style="list-style-type: none"> Paediatric Standard Treatment Book (8th Ed.) 2006 Obstetrics & Gynaecology Standard Treatment Book (6th Ed.) 2010 Standard Treatment for Common Illnesses of Adults in Papua New Guinea (4th Ed.) 2005 <p>Pg. 104</p>	<p>30</p> <p>30</p> <p>30</p>	NDoH
	<p>175. Teaching support: equipment</p> <ul style="list-style-type: none"> Staff computers Basic procedures adult manikin Basic dressing sets: 2 kidney dishes 3 gallipots 3 dressing forceps 1 suture holder 1 pair dressing scissors 1 dressing tray Dressing consumables: suture needles and gut 	<p>2</p> <p>1</p> <p>2</p> <p>Usually in packs</p>	<p>NDoH AusAID</p> <p>PHO Medical</p>

8.11 CHW School: Tinsley

Agency: Western Highlands Baptist Health services

Overall assessment summary

Overall assessment of the ability of the Tinsley CHW School to implement the standard CHW curriculum is good. Strengths of the school include a teaching staff comprised of members that hold a required health professional qualification. Three teachers also hold a teaching qualification at diploma level with one currently undertaking a bachelor level teaching qualification. The clinical program is generally well planned but may see students going to their clinical placement late because of the difficulties of transport or because of tribal fighting.

Tinsley, as does each of the CHW schools, teaches the 'new' curriculum. This curriculum adopts a competency-based approach. Implementation of the curriculum has added to the workload of the teachers and to the complexities of student assessments, particularly clinical assessments. Staff are concerned that the curriculum is now outdated and needs renewal. Teachers at Tinsley have generally been able to assess students at the appropriate times, as suggested by the curriculum, and have been able to keep the clinical assessment records of the students up-to-date for the most part. Students are not sent out on clinical placements if concerns about their safety as a result of tribal fighting occur. If staff members accompany the students to clinical placements they are given a small incentive payment for this work.

Visits to the non-hospital clinical environments by audit staff was made difficult because the two model aide posts used by the school were six hours drive away. There is a hospital on the same site as the school which was visited. Two major difficulties are faced by the school when its students are on their clinical placements, the first is getting the students to their placements and the second is accommodating the students while they are in the clinical areas.

When students are unable to proceed to clinical placements in the rural areas they attend the Tinsley Hospital to gain experience. While the hospital offers a range of experiences for CHW students the focus there is on intervention rather than prevention. One of the advantages of being located on the same campus as the hospital, however, is that specialist staff come to the CHW lessons for student teaching/learning of their related specialist areas such as the prevention/care of HIV Aids.

Teaching facilities are in need of improvement to bring the school to the required standard. There is no demonstration room which limits the range of clinical skills students are able to see demonstrated. Students do practice handwashing using basins of water but because of this lack of handwashing facilities students do not develop the crucial practice of handwashing before each attempt at a practical procedure, a habit that is essential for safe care in the clinical environments. The library appears well stocked but on closer examination it was found that up to 150 copies of the same very old text are on the shelves.

Staff teaching some of the practical procedures currently borrow equipment from the hospital but this practice assumes that the hospital has enough equipment to lend to the school as well as being willing to do so. Other equipment such as manikins are old and in poor repair.

Students going into the clinical areas are more likely to develop effective observation and diagnostic skills when they have access to basic clinical equipment such as a stethoscope and thermometers. Students also find that in some of the clinical facilities where they take their placements there are no basic pieces of equipment such as stethoscopes and as a result use their own. For these reasons some of the better schools have been equipping their students with personally held equipment that is used while on placements while students at Tinsley need to buy any equipment they carry. The practice of providing students with basic equipment is supported by the audit team as something that will improve the effectiveness of the CHW workforce in the long term.

The physical environments of the school including student and staff accommodations are reported separately. These facilities will limit possible increases in student numbers as they are barely adequate for existing students.

Implications for the future

While the Tinsley school is generally functioning quite well, staff expressed concern about increases in student numbers. One of the major requirements would be additional teaching staff and there are currently noted difficulties in attracting appropriate persons to teach in the CHW system. Ratios of teaching staff are determined by those listed in the current curriculum document and Tinsley claims to have vacant teaching positions. Teacher student ratios would need to be maintained when student numbers increase.

One major consideration about the potential rise in student enrolments is the impact this will have on available space and teaching methodologies. At Tinsley there is only one classroom. When the audit staff observed a class in action there 23 students filled the room. When two student groups need classrooms at the same time, the student mess is used as additional teaching space, a practice that is not viewed favourably by either students or staff. Given that current space is inadequate for current enrolment numbers the impact of increasing student numbers as student cohorts increase in size two major implications are possible. The first is that all students would not be accommodated in the existing one classroom which implies either two cohorts of students will need to be taught simultaneously or larger classrooms are constructed. The impact on teaching methodologies is more serious. Given that a competency based approach is used teachers need to interact more intensively with each of the students to facilitate learning. Even with current student numbers of around 25 students per cohort, as is the current enrolment figure, this is difficult to do. When the number of students are increased it will mean multiple groups of students of a size that is possible for interaction, say a maximum of 25. This increase will mean multiple groups either running simultaneously with multiple teachers or different groups timetabled to attend class at different times. It will mean additional teachers whichever way this particular challenge is approached.

Staffing requirements: As stated in Community Health Worker Certificate Program (Part 1) (2001)

It is **recommended** that the staffing guidelines set out in the Community Health Worker Certificate Program (Part 1) (2001) document are implemented. These requirements identify the category of teaching staff required as well as teacher to student ratio that has been used in assessing staff required for current enrolment levels in each of the CWH schools. Tinsley states it has a reduced teacher complement and does not employ a clinical assessor as required by the above document. It

needs to be noted that future expected increases in CHW student enrolment numbers will require additional staff.

While the salaries of CHW teaching staff are paid by the NDoH there is currently a considerable time lag of between six to twelve months before the name of the approved candidate is added to the payroll. Tinsley has one such teacher who is yet to be on the NDoH payroll and states paying this person a small salary is placing unacceptable stress on the school budget. It is therefore **recommended** that AusAID consider supplementing the Tinsley CHW school budget for the amounts paid by them to staff not yet on the NDOH payroll and that this supplementation continue until the name/s of the additional staff are added to the NDoH payroll.

In addition to teaching staff a **recommendation** has been made by the CHW principals group for secretarial support for principals.

Staff development:

The quality of a teaching institution is impacted on by the quality of its teaching staff. For example, there is an observed correlation between the school teaching staff members each holding a teaching qualification as well as their health qualification.

Health professional qualification

Each of the teaching staff holds a health professional qualification. Staff members who hold a CHW certificate do not have a route to a higher level qualification. Two of the staff hold a nursing qualification at diploma level upgrading to a degree level qualification would improve the staff abilities. There is currently no budget for the support of staff upgrading their qualification. It is therefore **recommended** that a nominated staff member annually be given opportunity for such an upgrade as there will be improvements in teaching quality as a result.

Education qualification:

All currently employed teaching staff members at Tinsley have an education qualification or is currently enrolled. One staff member is currently upgrading to a BEd.

Specific purpose short courses

The CHW audit found a range of areas where CHW teaching staff members need developmental assistance in order to better serve their school populations. Potential increases in student numbers will increase demands on teachers suggesting more acute need for these specific purpose workshops. Specific purpose short courses are **recommended**.

Student clinical experience supports:

Transporting students to their clinical placements remains a major problem for Tinsley CHW School. The school currently uses one old Toyota Hilux to transport students which needs replacing. Improved transport for students is therefore **recommended**.

Student held resources

Maximising the learning of students on clinical placements is facilitated when students each carry a small set of clinical equipment with them.

Each of the students also carries, or is expected to carry, a set of the standard treatment books. These books guide the processes of care: diagnosis, care planning including prescription of required medications that are the basis of the CHW interventional practice. It is therefore **recommended** that the required standard treatment books are supplied.

Teaching resources:

Recommendation of library resources is limited by the age of the current CHW curriculum which contains a complete, and now out-of-date, list of required resources. Those listed resources are those that will support teachers in their activities related to class preparation in the interim before curriculum renewal and are not viewed as those that would be freely accessed by students. Library cataloguing systems at Tinsley are not well developed with subsequent loss of texts when these become freely accessed.

Teaching equipment

The items listed in recommendations were identified by staff as being needed to improve teaching. The objects identified may not be held by the school or are old and not working.

Recommendations are given below for immediate, medium or long term implementation.

Recommendations:

	<p>179. Staffing recruitment to meet the requirements listed in the Community Health Worker Certificate Program (Part 1) (2001) include:</p> <ul style="list-style-type: none"> • Tutor with RN, CHW or HEO or EHO • clinical assessor with CHW or RN qualification <p style="text-align: right;">Pg. 103</p>	<p>2</p> <p>1</p>	<p>CHW School NDoH AusAID</p>
	<p>180. Staffing recruitment to support principal in administrative activities of the school</p> <ul style="list-style-type: none"> • Secretarial assistant preferably with accounting experience <p style="text-align: right;">Pg. 103</p>	<p>1</p>	<p>CHW School NDoH AusAID</p>
	<p>181. Staff development to achieve qualification at higher professional level includes:</p> <ul style="list-style-type: none"> • Bachelor of Nursing course as offered by UPNG • Bachelor of Midwifery as offered at PAU <p style="text-align: right;">Pg. 103</p>	<p>1 school nominated</p>	<p>CHW School NDoH AusAID</p>
	<p>182. Specific purpose short courses for staff development</p> <ul style="list-style-type: none"> • Management processes: time, basic data processing and computing (time management a particular problem at Salamo) 	<p>All staff members. Principal, secretarial</p>	<p>CHW School NDoH AusAID</p>

	<ul style="list-style-type: none"> • CHW school booking keeping / accounting • Library resource management: procurement, cataloguing 	assistant, curriculum implementer 1 staff member nominated by principal	
Rank one – immediate implementation	183. Student clinical experience support: transport, 20 seater vehicle OR Toyota Hilux Pg. 104	1	AusAID
	184. Student clinical experience support, student held resources: <ul style="list-style-type: none"> • Student stethoscope (1 per student) • Student sphygmomanometer (1 per student) • Clinical thermometers (2 per student) Pg. 104	30 30 60	AusAID NDoH
	185. Student held Standard treatment books (1 per student) <ul style="list-style-type: none"> • Paediatric Standard Treatment Book (8th Ed.) 2006 • Obstetrics & Gynaecology Standard Treatment Book (6th Ed.) 2010 • Standard Treatment for Common Illnesses of Adults in Papua New Guinea (4th Ed.) 2005 Pg. 104	30 30 30	NDoH
	186. Teaching support: new library resources <ul style="list-style-type: none"> • Carter, P (2012), <i>Lippincott's textbook for nursing assistants: a humanistic approach to caregiving</i>. Williams & Wilkins Health: Philadelphia • Government of Papua New Guinea (2010), <i>National health plan 2011-2020 Back to basics</i>. Gov PNG: Port Moresby • Johnson, R (2010), <i>Skills for midwifery practice</i>. Churchill Livingstone: Edinburg • McMurray, A (2010), <i>Community health & wellness: primary health care in practice</i>. Elsevier Australia: Chatswood NSW • Pairman, S. et al (2010) <i>Midwifery preparation for practice</i>. Elsevier: Chatswood NSW • Peate, I. & Nair, M (Eds.) (2011), <i>Fundamentals of anatomy and physiology for student nurses</i>. Wiley Blackwell: Chichester • Smith, B (2011), <i>Nursing care: an essential guide for nurses and health care workers in primary and secondary care</i>. Pearson Prentice Hall: Harlow • Watson, R (2011), <i>Anatomy and physiology for nurses</i>. Elsevier: Edinburg Pg. 104	1 5 2 2 2 5 5 5	AusAID
	187. Teaching support: equipment <ul style="list-style-type: none"> • Photocopier • Overhead projector 	1 2	NDoH AusAID

	<ul style="list-style-type: none"> • Transparency film – copier (box 100 sheets) • Set of specific purpose copier markers: blue, black, green, red 	5	
		5	
	<ul style="list-style-type: none"> • Basic dressing sets: 2 kidney dishes 3 gallipots 3 dressing forceps 1 suture holder 1 pair dressing scissors 1 dressing tray 	2	
	<ul style="list-style-type: none"> • Dressing consumables: suture needles and gut suture cutters sterile saline solution combine dressing packs bandages in three widths adhesives in three widths Pg. 104 	Usually in packs of 10	PHO Medical stores
Rank two – medium term implementation	188. Staff development to achieve qualification at higher professional level includes: <ul style="list-style-type: none"> • Bachelor of Nursing course as offered by UPNG Pg. 103 	1 school nominated	AusAID
	189. Specific purpose short courses for staff development <ul style="list-style-type: none"> • Course evaluation and policy development: processes, benefits and implementation Pg. 103 	1 principal	CHW School NDoH AusAID
	190. Student clinical experience support, student held resources: <ul style="list-style-type: none"> • Student stethoscope (1 per student) • Student sphygmomanometer (1 per student) • Clinical thermometers (2 per student) Pg. 104 	30 30 60	AusAID NDoH
	191. Student held Standard treatment books (1 per student) <ul style="list-style-type: none"> • Paediatric Standard Treatment Book (8th Ed.) 2006 • Obstetrics & Gynaecology Standard Treatment Book (6th Ed.) 2010 • Standard Treatment for Common Illnesses of Adults in Papua New Guinea (4th Ed.) 2005 Pg. 104 	30 30 30	NDoH
	192. Teaching support: equipment <ul style="list-style-type: none"> • Staff computers • Basic procedures adult manikin • Basic dressing sets: 2 kidney dishes 3 gallipots 3 dressing forceps 1 suture holder 1 pair dressing scissors 1 dressing tray • Dressing consumables: suture needles and gut suture cutters sterile saline solution combine dressing packs bandages in three widths adhesives in three widths 	3 1 2 Usually in packs of 10	NDoH AusAID PHO Medical stores

	<ul style="list-style-type: none"> • Audiometer 	1	NDoH
Rank three – long term implementation	193. Student clinical experience support, student held resources: <ul style="list-style-type: none"> • Student stethoscope (1 per student) • Student sphygmomanometer (1 per student) • Clinical thermometers (2 per student) Pg. 104	30 30 60	AusAID NDoH
	194. Student held Standard treatment books (1 per student) <ul style="list-style-type: none"> • Paediatric Standard Treatment Book (8th Ed.) 2006 • Obstetrics & Gynaecology Standard Treatment Book (6th Ed.) 2010 • Standard Treatment for Common Illnesses of Adults in Papua New Guinea (4th Ed.) 2005 Pg. 104	30 30 30	NDoH
	195. Teaching support: equipment <ul style="list-style-type: none"> • Basic procedures child manikin • Teaching stethoscopes Pg. 104	1 3	AusAID

8.12 Concluding comments

The audit of the CHW schools has been undertaken with the intent of improving the educational system for CHW workers. Recommendations have been made that have been derived from the data collected during the audit and are either national in nature or school specific. The format used for the school specific recommendations follows the same format for each of the schools with some recommendations made for each of the schools that are similar. The major reason for adopting this approach is to reduce the costs for their implementation. For example, bulk purchase of textbooks reduces per unit cost. As the schools continue with their educational programs the CHW audit staff team wishes them well.

A handwritten signature in cursive script, appearing to read 'Lin Lock', is centered on a light gray rectangular background.

Associate Professor Lin Lock

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Appendix A – CHW Schools Student and Staff Audit

CHW Schools Student and Staff Audit

Name of school:

School agency:

Number of students enrolled

Year	First year students	Second year students	Female	Male	Total
2012					
2011					
2010					
2009					

Number of attritions

Year	First year students	Second year students	Female	Male	Total
2012					
2011					
2010					
2009					

Number of graduates

Year	Female	Male	Total
2012			
2011			
2010			
2009			

Minimum entry requirement of student

Year 10	Year 10 + other	Year 12	Year 12+ other	Other

Student academic level on entry

Year	Year 10	Year 11	Year 12	other
2012				
2011				
2010				
2009				

Total expenditure by category 2009-12

Expenditures	2009	2010	2011	2012
Salaries				
Teaching costs				
Teaching aids and materials				
Student food and accommodation				
Student travel and books				
IT (computing and Internet)				
Uniforms				
Library				
Other				
Sub-total teaching costs				
Operational costs				
Administration materials				
Assistants' salary				
Maintenance				
Vehicle and plant costs				
Power				
Water				
Telephone				
Other				
Sub-total Operational Costs				
Total expenditures				

Total budget by source of income

Years	NDoH salaries	NDoH	School agency	donors	Tuition fees	others	total
2012							
2011							
2010							
2009							

Total cost per student unit

Year	Total expenditure <i>kina</i>	Total student number	Cost per unit <i>kina</i>
2012			
2011			
2010			
2009			

Staff numbers

School principal: (Standards minimum requirement 1) FT... PT...

Tutors (Standards minimum requirement 2) FT... PT...

Tutors paid by NDoH

Tutors not paid

Clinical Assessors (Standards minimum requirement 1) FT... PT...

Clinical assessors paid by NDoH

Clinical assessors not paid

Support staff FT... PT...

Support staff paid by NDoH

Support staff not paid

Number of staff positions not filled

Category of staff positions not filled

Principal

Tutor

Clinical assessor

Student staff ratios

Category	Always	Usually	Sometimes	Rarely	Not yet
Lecturer 1:10					
Clinical tutor 1:5					
Small group leader 1:5					

Teaching staff by gender

	Female	Male	Total	Percent female	Percent male
Full time					
Part time					

Teaching staff by age

<35 years	35-44 years	45-54 years	55-64 years	65+ years

Professional health qualification of full time teaching staff by number

Certificate	Diploma	Bachelors	Masters	PhD

Education qualification of teaching staff by position

	Certificate	Diploma	Bachelors	Masters	PhD
Principal					
Tutors					
Clinical assessor					

Teaching qualification of full time teaching staff

Certificate	Diploma	Bachelors	Masters	PhD

Average years of teaching experience of full time teaching staff

Qualified teaching staff	Unqualified teaching staff	Total staff

Average years of clinical experience of full time teaching staff

Qualified teaching staff	Unqualified teaching staff	Total staff

Appendix B – CHW Schools Audit Document

Appendix C – Questions from the Standards for Clinical Facilities

Appendix D – Submitted with infrastructure report

Appendix E – Abbreviations

ARB	Assessment Record Book
AusAID	Australian Agency for International Development
CDUT	Curriculum Development Training Unit
CHW	Community Health Worker
CHS	Christian Health Services
CMS	Church Medical Services
EHO	Environmental Health Officer
EP	Evidence Portfolio
FG	Facilitators Guide
HEO	Health Extension Officer
HERS	Higher Education Reform Strategy
HRMB	Human Resources Management Board
LG	Learners Guide
MO	Medical officer
NDOH	National Department of Health
NHCS	National Headcount Survey
NHP	National Health Plan
OHE	Office of Higher Education
PNG	Papua New Guinea
SL	Skills Logbook

Appendix F – Persons consulted during CHW schools audit

Persons consulted during CHW schools audit

Dr Uma **Ambi**

Mrs Tegeo Antisopi **Antiko**

Ms Carolyn **Apeti**

Mr William **Biau**

Ms Sharon **Bigam**

Mr Raymond **Bharaun**

Mr Pius **Bobby**

Ms Dianne **Dagan**

Mr Roger **Damar**

Mr Lengi **Derring**

Mrs Alice **Erai**

Mr Steven **Gonga**

Mrs Petra **Goviro**

Ms Rachel **Hawele**

Mr Augusta **Irakau**

Mr Alex **James**

Ms Marilyn **Jime**

Pr Jacob **Joel**

Mr Joseph **Kala**

Ms Sarah **Kani**

Mrs Lornah **Kenneth**

Mrs Mary **Killilo**

Mr Alo P **Kiso**

Ms joy **Koi**

Mrs Polyn Salo **Ko-ou**

Ms Clare **Kopipi**

Mr Peter **Kuamba**

Mr Ben **Kuas**

Fr Augustine **Kulmana**

Mr James **Kuma**

Me Kila **Kusape**

Ms Menate **Lamowa**

Ms Elva **Lionel**

Mr Tepping **Maikea**

Dr Gregory **Manao**

Rev Inosi **Manassah**

Mr John **Maura**

Mr Nelson **Megerie**

Sr Gaudentia **Meiri**

Mr Francis **Michael**

Mr Jack **Muius**

Mrs Gemma **Molio**

Mr Moses **Naewa**

Me Marlin **Nembo**

Mr Gidisa **Ngagao**

Mr Nentepa **Nii**

Mr Noah **Noah**

Ms Annie **Ove**

Mr Leo **Pasingu**

Mrs Catherine **Peij**

Mr Terry **Pohou**

Ms Agatha **Rangamat**

Ms Jackina **Sauli**

Mr Rainey **Siawong**

Mr Joseph **Sika**

Ms Akiri **Simon**

Mr Charles **Sirongo**

Mrs Bernnedine **Sissai**

Mrs Cathreen **Songonai**

Mr Oliawo **Suago**

Mrs Kumson **Sunga**

Mr Dabik **Suari**

Ms Jacinta **Tangfo**

Mr Kye **Taylor**

Mr Benfred **Thomas**

Mr Robyn-Hood **Tony**

Mr John Tora

Mr Wanauna **Waragiye**

Mr Aiden **Whyett**

Mrs Roeguo **Wofin**

Mrs Susan **Wulali**

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