



Certificate in Basic Pharmacy Management (CBPM) for Pharmacy Assistants In Papua New Guinea (PNG)



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Title of Presentation

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Outline of presentation

- Location of PNG
- Some demographic, socioeconomic & health data
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Where is Papua New Guinea (PNG) ?



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Informal Names of PNG

dubbed “land of paradise”



... and also “land of unexpected”



Some demographic & socioeconomic data

- Land area : 462,840 sq. km
- Location : South Western Pacific
- Population : 7.8 million
- Cultural diversity : Over 800 ethnic groups
- Economy : Fast growing mining industry (IMF)
: (Gold, copper, silver, nickel, oil, LNG) & timber, fisheries.
- Agric. Economy : Low (0.49% arable land)
Coffee, tea, cocoa, copra & palm oil
- Forests & swamps: (98.1%)



Background (cont'd)



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Some important health data

- Maternal mortality : 250 per 100,000 live births
- Infant mortality : 47 per 1,000 live births
- Immunization : coverage 65 – 70%

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Medical supplies services in rural HFs



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- Over 87% of PNG Population is rural
- The rural populations are served by rural health facilities such as Health Centers (HC), and Community Aid posts (CAP)
- Pharmaceutical Services are delivered by Community Health Workers (CHWs),
- There are no pharmaceutically trained personnel

PNG is situated in a geographical belt known as , “ring of fire”, PNG experiences many natural disasters , from tsunamis, floods, earthquakes and volcanoes .

These, as we can see pose challenges to running of some health facilities: hospitals & medical stores



Challenges in delivery of medical supplies: Impact of rugged terrains



Challenges in delivery of medical supplies : Long walking distances

A typical Health Center serves a population of about 5,000 to 10,000 people

These people would have **walked for 2, 3 or 4 days** from distant villages to the Health Center.





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Challenges in delivery of medical supplies: Impacts of *Pull* & *Push* systems



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- The “*Pull*” System based on individual HF requisitions and
- The “*Push*” system (100% Kits) based on NDoH – estimates and even distribution across HFs whether required or not.



*Lack of Good Stock
Management skills by
CHWs result into
disorganized storage on
the floor.*

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Challenges in delivery of medical supplies (*cont'd*) *Impact of tsunamis, floods and landslides*

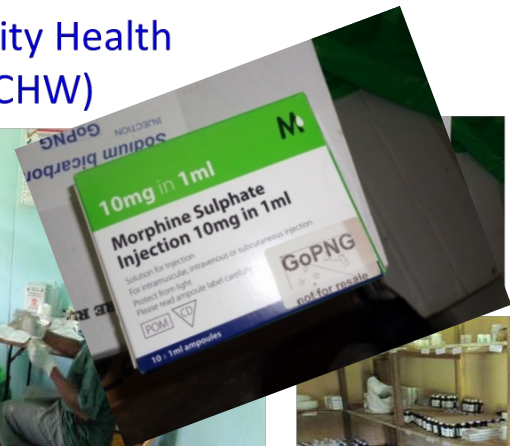


Challenges of delivery of pharmaceutical services: irrational use of dangerous medicines

Challenges in delivery of pharmaceutical services

*Impacts of lack of pharmaceutically trained personnel:
Objectionable medicines storage conditions; dangerous packaging and dispensing; inability to discriminate poisons and narcotics and absence of provision for important medicines information towards Rational Usage*

Community Health Worker (CHW)





Challenges of health services- inequities.



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Inequities in Health Services in PNG :

- Only 56 % of health service delivery staff were serving in rural areas (87% of population)
- Fewer out reach patrols, limited support and supervision of health staff in rural areas
- More frequent drug stock-outs at rural health centers and aid posts
- About 53% of health facilities had shortages of essential medicines for more than one week in any month/2012/13

Source:

Christopher Morgan¹, Fabian Kong², Jackson A K Lauwo³, Sera Ngeh⁴, Pallavi Yagnik⁵, George Gani⁶, Rosewitha Iannes⁷, Sipana Beulah⁸, Philip G K Kigodi⁹ & BPharm 2-4 Pharmacy students¹⁰ (2013). Evaluation of Medical Supplies Distribution and Usage in Papua New Guinea (PNG); 6 –22 June 2013

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Storage of medicines on the floor



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In addition to the above inequities, problems such as :
Lack of good storage of medicines such as cold rooms,
refrigerators and most importantly lack of pharmaceutically
trained personnel in the HFs resulted into:

- Improper storage of medicines on the floor



Poor management of certain medicines may lead to too many medicines expiring.

- Accumulation of expired medicines in many health facilities.
“... effective management by trained Pharmacy assistants would reduce quantities of Expired medicines”



- Inappropriate Disposal of Pharmaceutical Waste
(About 6-10m above a water creek)



Overall factors contributing to the above deficiencies are mainly staffing related.



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- Pharmaceutically trained staffing shortages were critical issues in HFs including Provincial Transit Stores (PTS)
- No Pharmacy Assistants at Health Facilities (HFs)
- Community Health Workers (CHWs) at HFs have limited pharmaceutical knowledge.
- It became clear from the numerous reports that the staffing issues in HFs must be addressed; the best way forward through training pharmacy assistants.



Suggested Interventions:

- An NDoH - request to UPNG to train pharmacy assistants Would serve as **important intervention**, since trained pharmacy assistants would fill in the professional gaps identified above.
- Hence; the proposed **Certificate in Basic Pharmacy Management (CBPM) for Pharmacy Assistants at the University of Papua New Guinea**



Objectives of CBPM courses



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To train pharmacy assistants who will be able to:

- Classify medicines provided in the 100% Health Center kits; carry out basic compounding and packaging procedures where appropriate.
- Ensure quality storage & handling of medicines in order to preserve stability and effectiveness.
- Utilize basic chemistry principles to highlight stability problems and to explain how medicines act therapeutically.
- List basic therapeutic uses of medicines stocked in the HFs highlighting important side-effects where appropriate.
- **Acquire and use important management skills for efficient Selection, procurement, quality storage of medicines stock.**



Admission Requirements



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- **Grade 12 School leavers** with 2 sciences and a minimum of a C grade.
- **Students are earmarked** to Health Facilities by Provincial Health Authorities (PHAs).
- **Gender balance is strongly observed;** to ensure women are fairly represented



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The CBPM program structure & courses



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	Course code	Course name	Credit points
Sem 1	2.14901	Basic Pharmaceutics	3
	2.14902	Storage and Handling of Medicines	3
	2.14903	Management of Medical Supplies	3
Sem 2	2.14904	Introduction to Records and Data Management	3
	2.14905	Medicines Information Skills	3
	2.14906	Pharmacy Practice Fundamentals	3
Sem 1	2.14907	Basic Pharmaceutical Chemistry	3
	2.14908	Basic Pharmacology and Pharmaceutical Microbiology	3
		Total credit points	24



Certificate in Basic Pharmacy Management (CBPM)



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Management of Medical Supplies

Course No. 2.14903

Training & Learning Materials designed:

- To suit student centered/ self learning
- To address learning objectives that shall solve or mitigate the problems & deficiencies identified in the rural HFs



PNG National Department of Health



Delivery of program



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- Limited *on campus* resources, the program delivered through *flexible distance mode*, Open College & coordinated by Pharmacy Discipline.
- Funding support is being provided by the National Department of Health for the initial 4 years.



Program commencement (as pilot)



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- Program commenced as pilot in August 2016
- 75 students enrolled (15x 5PHAs)
- Students are in continuous self learning by distance mode
- Students also spend time in hospital pharmacies under pharmacists supervision



Program implementation challenges & enablers



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- Write-up of training materials carried out by pharmacy academic staff in collaboration with Open College instructional designers over a period of two years (2014/2015)
- Funding for write-up & for piloting the program tenable from the NDoH
- Implementation logistics by Pharmacy Discipline, Open College & NDoH
- Memorandum of Understanding (MOU) between the NDoH & University, underway.
- Amendment of Medicine and Cosmetic Act (MCA) of 1999 to include pharmacy assistants as another pharmacy profession, that requires registration



Conclusions



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A successful Pharmacy Management Certificate Program shall:

- Train pharmacy assistants who will significantly contribute to Government's priority of delivery of pharmaceutical services to the rural majority PNG. It will also contribute significantly to community service. The trained Pharmacy Assistants shall be able to carry out basic medical supplies management activities and provide basic information on usage of medicines. They will be able to heighten awareness on the fundamentals of pharmacovigilance of selected medicines .

In addition, a successful Pharmacy Management Certificate Program shall:

- Introduce a New Academic Business in the University (University growth)
- Create new avenues for research & international collaboration
- Contribute to Global trends in pharmacy practice initiatives such as the Global Health Supply Chains for Sustainable Health Outcomes (GHSCS).
- Implementation of the CBPM program may not be easy. This being a pilot program , other challenges may come to light as we venture into the unknown, and shall be addressed one at a time.



Acknowledgements



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END



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THANK YOU
VERY MUCH

ASANTE SANA