

Action-research on Peer Educator Networks in Cambodia: Opportunities and challenges

World Diabetes Congress 2011

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- A) Background and roles of Peer Educator Networks & NGO as catalysts for reform

- B) What we have learned so far about P.E.N. and challenges & opportunities related to doing action-research

- C) What we need to find out

A1 Background rural Cambodia

1. 9 out of 10 people with DM have no access to Diabetes Care (“I wish I had AIDS”)
2. Lack of professionals + financial resources
3. Private care is too costly (Rural GDP USD 600 p/year)
4. 70% of patients is unaware of their DM
5. Iatrogenic poverty (transfer of wealth from poor to rich)
6. Market failure, unmet demand, no C.o.C
7. NCD \neq “donor-darling” (Low Income Countries)
Primary prevention yes but...how to do Secondary prevention among patients?

A2 Ideal features of a primary care response

1. Costs of routine care < USD \$ 5 per month per patient (acceptable, affordable, financial sustainability)
2. Earlier diagnosis
3. Control main risk factors for chronic NCD
4. Retention of chronic patients long term
5. Reformed incentive environment for its providers
6. Shared ownership among patients and public interest serving stakeholders (good governance)

A3 Community-Inputs : Peer Educator Networks

1. Organize self-screening for DM & HBP
2. Counsel, assess & register detected patients
3. Train DM patients & follow-up
4. Report monthly to NGO + Operational District Office
5. Help organize 2x/yr lab service
6. Facilitate Dr appointments;
7. Track & probe defaulting patients
8. Help organize consultations
9. Monitor Revolving Drug Fund
10. Support Village High Blood Pressure Groups
11. Join in Primary Prevention
12. Distribute vouchers to poor patients



Trained patients can perform tasks that do not require

professionals

The Revolving Drug Fund secures regular access for chronic

patients to their routine prescription medication



Task shifting: If diabetes patients are paid to train and follow-up other patients the costs of care plummet although a new work force is added to a more responsive health system.



A4 provider payment system for P.E. activity

| | USD \$ | Description of incentive |
|----|---------|---|
| 1 | \$ 0.04 | per Kilometer |
| 2 | \$ 0.01 | per screened adult for Diabetes (fill screening form with name) |
| 3 | \$ 0.25 | for detection by Village High Blood Pressure Group Leader of a new High Blood Pressure patient if followed by confirmation & assessment and registration as HBP in MoPoTsyo |
| 4 | \$ 0.99 | for screening activity (DM or HBP) if further than 5 Kilometers from home village |
| 5 | \$ 0.50 | for P.E. for first assessment of a new DM or HBP patient (fill the assessment form completely) |
| 6 | \$ 1.98 | to detect a new DM patient who is registered as member of MoPoTsyo |
| 7 | \$ 0.25 | to find a new HBP patient |
| 8 | \$ 0.12 | to collect a pharmacy invoice from patients (original white) from DM or HBP patients |
| 9 | \$ 0.99 | for training session for group of DM patients, but not more than 5 weeks per month |
| 10 | \$ 0.74 | for coming to the hospital 1 time per week (different reasons) |
| 11 | \$ 0.99 | to meet the Village High Blood Pressure Chief to set up the VHBP Group first time |
| 12 | \$ 0.99 | to train the Village High Blood Pressure Group Leader to play his role |
| 13 | \$ 0.99 | for training of every VHBP Group Leader (1 time per 3 months) |
| 14 | \$ 0.12 | to collect the data every month from the register of the VHBP Group Leader |
| 15 | \$ 0.02 | for follow up of every registered patient (it can DM, or HBP, or DM + HBP) |
| 16 | \$ 5.00 | Cellcard 5 Dollar for peer educators with activity report |
| 17 | \$ 2.48 | for getting vehicle repaired (1 time per month) |
| 18 | \$ 0.12 | for measuring glucose in blood using strips |
| 19 | \$ 1.98 | for incentive allowance per day (find patients to be trained to become peer educators) |
| 20 | \$ 2.97 | for Peer Educator who finds a suitable patient to be trained as peer educator |
| 21 | \$ 1.98 | for phone card for peer educator for every patient who accepts to be trained |
| 22 | \$ 2.48 | per day for food of a trainee patient to become peer educator |
| 23 | actual | Transportation expenses of patients who are trained to become peer educators |

A5

monitoring & evaluation system by P.E.N. of P.E.N.

examples of 105 indicators for performance based incentive system

| OBSERVE THE PATIENT SELF RECORDING BOOK |
|--|
| 7. number of self urine recordings during last month |
| 8. was there self recording of urine results during last 3 months?..... |
| 9. was Fasting Blood Glucose done last month..... |
| 10. How often was FBG done during last 3 months |
| 11. What was the last FBG result or last PPBG result |
| 12. Was this patient registered as hypertensive when entering at MoPoTsyo (>130 and or >80)?..... |
| 13. was blood pressure measured during last month |
| 14. How often BP was measured over the past 3 months?..... |
| 15. What is the average Systole and the average Diastolic BP over the past 3 months |
| 16. was weight controlled last month..... |
| 17. How often was weight controlled last 3months..... |
| 18. last recorded result of kg in the Patient Book..... |
| 19. Does the MoPoTsyo Patient Book have a Doctor's prescription to take anti diabetes medicines ?..... |

| RE-ASSESSMENT DATA FROM CARD + FOOT EXAMINATION FORM |
|--|
| 20. Result of the Blood Glucose test |
| 21. result of BP measured by evaluator 2 x times SITTING CALMLY..... |
| 22. what is heart rate at rest of this patient measured by evaluator?..... |
| 23. Evaluator weighs the patient, result is:..... |
| 24. Evaluator heights the patient, result is:..... |
| 25. Evaluator measures waist, result is:..... |
| 26. Evaluator measures hip, result is:..... |
| 27. Does the patient now have an open foot ulcer..... |
| 28. Did the patient foot show that there has been a foot ulcer in the past?..... |

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A6 NGO main inputs : reform catalyst

1. Plan & prepare action, Monitoring, Learning, Adaptation etc.
2. Development of adapted tools, standards,
3. Capacity building:
 - of Members (=DM patients)
 - of Health Service providers
4. Prefinancing + investment into a new Input Mix
5. Subsidy provision
6. Representation
7. Decentralization

B1 What we know of PEN & NGO in P.P.-Partnership

Inputs

reformed input mix, demand side co-ownership, new functions, roles, outreach on risk factors, reformed incentive system,

Evidence Sources:

own documentation
(150p Report 5 years)

Outputs

active detection, Lifestyle counseling, Patient Education, Health Service co-organisation & delivery (Lab, Medical Consultation, Medicines), Equity Fund;

own documentation
& external evaluation

Outcomes

Earlier Diagnosis, Improved Biomarkers (BG, BP), skills & knowledge, reduced Out of Pocket Health Expenditure, appreciation, improved quality of life, restored productivity,

own documentation
& external evaluation

Impact

Retention, reduced secondary complications, reduced poverty, healthy ageing, equity

very little, no independent studies!

B2 Comparing External Evaluation Results with Results from regular internal evaluations
the same area, different patients, different length of enrolment, similar profiles;

1 x “external” evaluation
registered at least 2 years (N=150)

2 x internal evaluations
reg. at least 6 months (N=162)

Treatment to Target July 2010:

FBG (<6.1 mmol) 33.9%

Syst BP(<130mm) from 46.5% to 65.9%

Diast BP(<80mm) from 44.2% to 62.8%

BMI changes not significant

Treatment to Target

July 2010: FBG 28% (no PPBG)

July 2011: FBG 43% or PPBG 46%

July 2010 Syst BP from 48% to 48%

July 2011 Syst BP from 43% to 51%

July 2010 BP Diast from 39% to 48%

July 2011 BP Diast from 37% to 52%

BMI changes not significant

B3 Changes in BG compared with time of registration

July 2011 internal re-assessment among 162 randomly selected DM patients in Ang Roka OD registered at least 6 months (9 areas each with a Peer Educator)

| P.E. code | BASELINE assessment (at time of registration) | | | | July 2011 (Re-assessment) N=162 | | | |
|-----------|---|-------------------|-----------------|------------------|---------------------------------|---------|-------------------|--------------------|
| | FBG# of patients | PPBG# of patients | total FBG mg/dl | total PPBG mg/dl | R FBG# | R PPBG# | R total FBG mg/dl | R total PPBG mg/dl |
| ARA | 17 | 16 | 3454 | 4620 | 7 | 10 | 779 | 2591 |
| ARB | 14 | 14 | 2894 | 4289 | 1 | 18 | 181 | 3951 |
| ARD | 19 | 18 | 3749 | 5616 | 5 | 13 | 797 | 2998 |
| ARE | 19 | 19 | 4071 | 6086 | 6 | 12 | 870 | 3651 |
| ARF | 19 | 19 | 4105 | 5616 | 0 | 19 | 0 | 3310 |
| ARG | 19 | 19 | 3203 | 4791 | 0 | 18 | 0 | 2925 |
| ARH | 19 | 19 | 3642 | 4845 | 3 | 16 | 279 | 3041 |
| ARI | 19 | 18 | 4071 | 5454 | 2 | 13 | 282 | 3248 |
| ARJ | 19 | 17 | 3121 | 4517 | 4 | 15 | 386 | 2471 |
| | 164 | 159 | 32,310 | 45,834 | 28 | 134 | 3,574 | 28,186 |
| | Assessm. Averages mg | | 197 | 288 | | | 128 | 210 |
| | | mmol | 10.9 | 16.0 | | | 7.1 | 11.7 |

In July 2009 FBG had shown a drop from 10.3 to 7.3 mmol (N=152)

B4 Doing Action Research on P.E.N.

Challenges

vs.

Opportunities

1. Attribute effects to this P.E.N. & NGO combination

1. many outputs ..
2. many outcomes ..
3. long term impact ??

2. Implementation requires constant adaptations, few concessions to research requirements;

3. Inaccuracies due to limited capacity, low quality data;

4. Ethical issues, appropriate role of research in a context with great needs

1. Research results are feasible & realistic;

2. Ministry of Health & Development Partners are stakeholders

3. Wealth of Data since 2005, Long Term cohort.

4. If Monitoring & assessment data yield valuable research, it should be externally funded

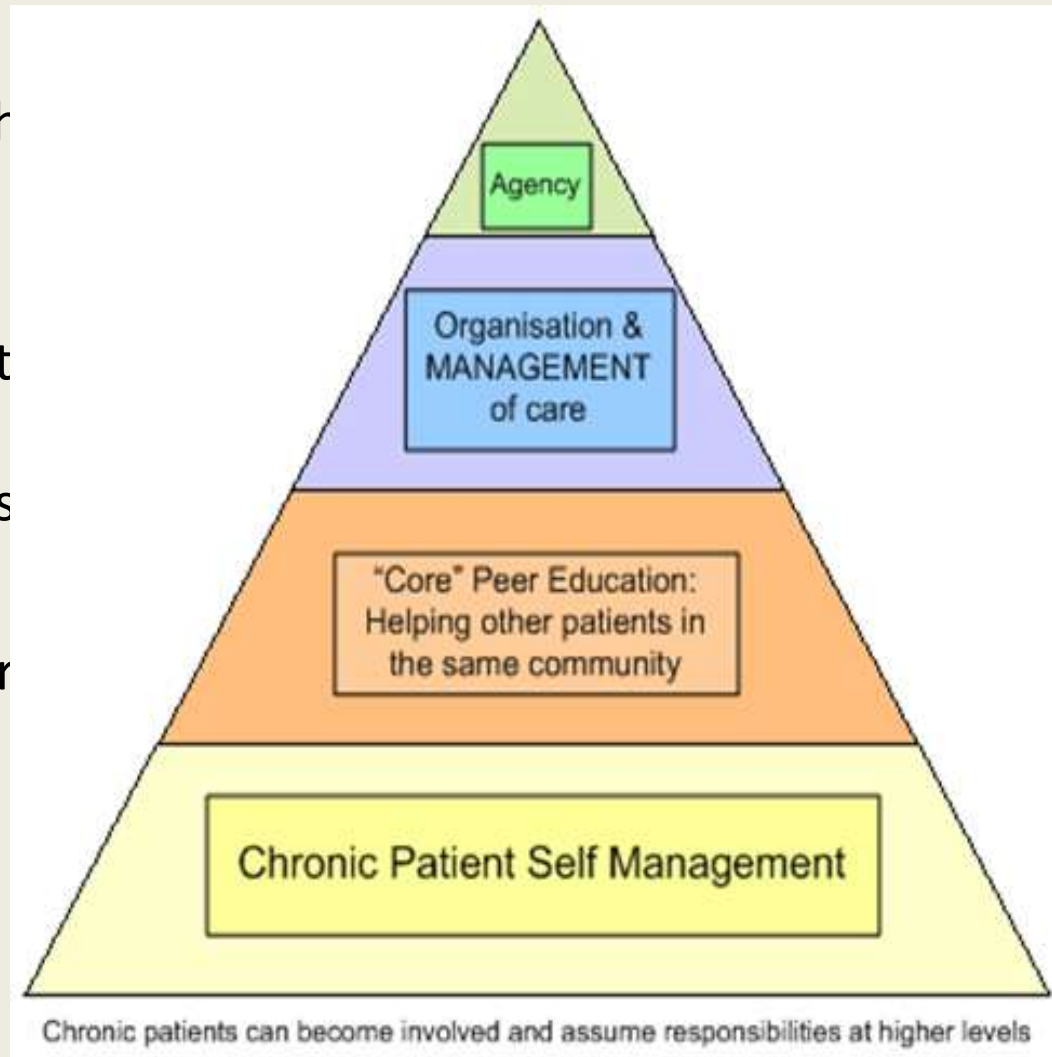
5. Technology (telephone)

6. Collaborations with Universities...

C1

to find out

1. How Peer Educators fit optimally into primary health care ? Role(s)
2. Maintain separate P.E.N. unit & structure(s) or allocate PE individuals to health facilities
3. Optimal financing & provider payment & governance ?
4. Optimize equity ?



C2 Needed Research: Long term Impact

on Patients **OUTCOMES:**

1. Retention & loyalty, voice
2. Mortality, stroke, CKD, amputations, blindness,
3. Equity (age, sex, S/E), O.O.P
4. Jobs, restored productivity, well-being and security

on General Population:

1. Trust & expectations
2. Risk factor awareness
3. Healthier lifestyles & healthy ageing

on Health System:

1. Policy & practice vacuum
2. Ownership & governance primary health care
3. Linkages with TB, MCH
4. Health service quality + utilization efficiency, cost-effectiveness;
5. Third Party Payers (CBHI & HEF covering routine care;
6. Supply side barriers reduced
7. Managed care (technology)
8. Places of control of main risk factors

C3 How can we measure all other development outcomes ?

1. Of increasing the scope of PEN action in a rapidly changing society;
2. Of service organisation by and for patients
3. Of blending demand- and supply sides;

To map, measure and describe accurately what is precisely going on poses important challenges for scientists!

Acknowledgements

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