Role of m-Health based nursing in cancer care continuum

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How to deliver equitable healthcare to 1.3 Billion Indians???

70% Indians are rural but nearly all tertiary cares are in metros

Healthcare is twice expensive for rural people due to travel and lost wages
Cancer:

The Emperor of all maladies?
Cancer in India:

- Cancer is a generic term for a large group of diseases that can affect any part of the body

- ~ 0.7 Mn new cancer patients every year

- ~2.5 Mn patients living with cancer

- ~ .56 Mn cancer related deaths every year

- 24 Cancer speciality hospitals; many private hospitals provide specialised cancer treatment
Cancer treatment:

- Cancer patients may have a very short life or may live years

- Need super speciality consultation and treatment:
  - Haematology and clinical oncology
  - Surgical oncology
  - Radiotherapy
  - Pain management and Palliative Care
  - Psychiatric and psychological management ...
  - Rehabilitation
Hundreds of serious patients live in open air outside tertiary care facilities
Role of nurses in Cancer Care Continuum:

- Doctor- patient ratio in India is 1: 1700
  - very few super specialists

- Patients travel long distances to reach tertiary care centres and often needed to stay outside in open air for days

- Inclusion of nurses in the cancer care is imperative
  - Execute routine tasks
  - Relieve specialists from mundane tasks
  - Help specialists with filtered information
  - Build a bridge between patients and specialists
  - Handling nursing issues even when patient is at home
Gujarat: some facts

- Area: 1,96,024 Sq. Km.
- Population: over 62.7 Million
- Urban Rural Divide
- Inaccessible hilly regions, desert, coasts, tribal areas

Ahmedabad
mHealth: Ideal for Gujarat

• Healthcare in rural Gujarat, where 70% population live. Due to huge demand-supply gap treatment costs in rural India is nearly twice as costly as that in urban India.

• This provides a significant opportunity for delivering high quality and cost competitive healthcare services in rural Gujarat at doorsteps.
Gujarat Cancer & Research Institute (GCRI)

A cancer care facility of national importance - located in Ahmedabad
Present Situation at GCRI

24.08% Outside Gujarat

62.57% Outside Ahmedabad (Within Gujarat)

13.3% Ahmedabad

mHealth based nursing may help both local and distal patients
Objectives for mHealth in Cancer Care:

We have divided objectives under three headings

**Community part:**
- Easy accessibility for **screening** and **early Detection** of cancer at remote/rural places with the help of m-Health
- To provide **post operative care and follow up** of the surgical patient with the help of m-Health
- To provide **palliative care** with the help of m-Health
- To Provide home based palliative care to advanced staged cancer patients with the help of m-Health
Objectives for m-Health in Cancer Care:

Hospital:
• Patient can be seen by consultant in different wards of hospital with the concept of e-rounds

Networking with satellite centre:
• To establish m-Health consultancy between nodal centre at GCRI and satellite unit at

✓ Siddhpur Cancer Hospital (110 Kms),
✓ Community Onclogy Centre (COC) Vasna (15 Kms)
✓ Rajkot Cancer Hospital (250 Kms).
Trinnect architecture:

- High definition video consultation via web or mobile apps.

- Sharing of medical records and diaries over a secured cloud platform.

- Remote medical sensors (stetho, ECG etc) for accurate and fast diagnosis (soon).

- 3G/4G cellular/landline data connectivity.

Innovative, ultra low cost, pervasive
Trinnect architecture:

- Interactive video
- Patient info and workspace
Top mHealth technology at ultra-low cost

Installation cost as little as a laptop/tablet + a broadband connection
Trial runs between CAMA Hall & GCRI ward and CAMA Hall and Mathabhanganga, West Bengal
Trinnect is not a simple video conferencing

But much more
Developing Nursing Task Force for mHealth

• Nursing staff will have short training on Tele Medicine/mHealth, to prepare the future work force in health informatics

• GCRI had plans to develop a centre for Nursing informatics courses in future

• GCRI also have plans to integrate Nursing work force in Tele health/mHealth services provided by the institute
Integrating role of nurses in mHealth project

- Nurses will go to the community and coordinate at field level
- Nurses will conduct cancer screening, detection, and awareness activity
• Nurses will do post operative follow up care under the guidance of consultant
• Nurses will provide Palliative Care to home bound, advanced stage patients
• They will encourage patients for various rehabilitation program
• They will be Link between patients and consultants
QUESTIONS