Establishing global health cancer care partnerships across common ground: Building on nuclear security, cancer disparities, education and mentorship.

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• Views expressed are those of the presenter !!!
• No endorsement by NCI, NIH, ASPR, DHHS or any other U.S. Government agencies has been given or inferred
Outline & key points

• Global health receives far more words than investment
• Global burden of disease – infectious diseases and non-communicable diseases: partners not competitors
• Commonality of need – global health, global security and altruism/human service
• Gap in investment in NCD’s
• Things that Gov’t and NGO’s can and can’t do well
• ICEC- an idea into a model and into an entity
• Words into action
• Co-conspirators welcome
Defining the Problem:

WHO Global Burden of Disease

LMIC cancer death
% of global total
2015- 70%
2030- 75%
Defining the problem for example

**ACCESS TO RADIOTHERAPY:**

Radiotherapy is an essential part of the treatment of cancer

There is a shortfall of over 5000 radiotherapy machines in the developing world

Over 30 African and Asian countries have no access to radiotherapy

### Availability of treatment

<table>
<thead>
<tr>
<th>Number of people served by a single radiotherapy centre (latest available data 1995–2003)</th>
</tr>
</thead>
<tbody>
<tr>
<td>below 500,000</td>
</tr>
<tr>
<td>500,000–999,999</td>
</tr>
<tr>
<td>10–19.9 million</td>
</tr>
<tr>
<td>20 million and above</td>
</tr>
<tr>
<td>1–4.9 million</td>
</tr>
<tr>
<td>no centre</td>
</tr>
<tr>
<td>5–9.9 million</td>
</tr>
<tr>
<td>no data</td>
</tr>
</tbody>
</table>
Key facts

• The WHO Constitution enshrines “...the highest attainable standard of health as a fundamental right of every human being.”

• The right to health includes access to timely, acceptable, and affordable health care of appropriate quality.

• Yet, about 100 million people globally are pushed below the poverty line as a result of health care expenditure ever year.

• Vulnerable and marginalized groups in societies tend to bear an undue proportion of health problems.

• Universal health coverage is a means to promote the right to health.

http://www.who.int/mediacentre/factsheets/fs323/en/
Global terrorism--

co-location of medical radiation sources
After the windfall: Plateauing budgets for global health sharpen the focus on what really works

Skewed funding For NCDs
The diseases that cause the highest burden—expressed in disability-adjusted life years, or DALYs—don’t get most of the international largesse. In 2010, HIV/AIDS

The end of the surge
Aid for global health, by channel

Disease burden
Aid

Source: Institute for Health Metrics and Evaluation

Source: Institute for Health Metrics and Evaluation
There are things each can and cannot do (well)

Government

Non-Government Organizations (NGO)

Firewall
- outside activity

Partnerships forming

Professional Societies
Universities
World peace foundations
ICEC functional components

**Associates in ICEC Centers**
- Senior associates
- Junior associates
- Associates-In-training

**Hubs**
- ICEC Central
  - International hubs
  - Domestic hubs

**Experts**
- Expert panels
- Expert centers
- Senior Associates Become experts

LMICs and indigenous populations
In resource rich countries

Cancer centers, universities, prof societies, private practice groups

Trainees, academics, practitioners, retirees, senior mentors
# ICEC Expert Panels:
Broad spectrum of expertise for complex systems solution

<table>
<thead>
<tr>
<th>Medical</th>
<th>Science, non-MD</th>
<th>Support</th>
</tr>
</thead>
<tbody>
<tr>
<td>Radiation oncologists</td>
<td>Prevention and screening</td>
<td>Educational tools</td>
</tr>
<tr>
<td>Medical oncologists</td>
<td>Epidemiologists</td>
<td>Finance</td>
</tr>
<tr>
<td>Pediatric oncologists</td>
<td>Medical physicists</td>
<td>Clinic administration</td>
</tr>
<tr>
<td>Surgical oncologists</td>
<td>Technologists</td>
<td>International policy</td>
</tr>
<tr>
<td>Nurses</td>
<td>Basic &amp; translational scientists</td>
<td>Patient advocacy</td>
</tr>
<tr>
<td>Pathologists</td>
<td>Treatment guidelines</td>
<td>Economists</td>
</tr>
<tr>
<td>Radiologists</td>
<td>Statisticians</td>
<td>Social workers</td>
</tr>
<tr>
<td>Surgeons - general</td>
<td>Social scientists</td>
<td>Communications</td>
</tr>
<tr>
<td>Surgical subspecialists</td>
<td>Regulatory Affairs specialists</td>
<td>Cancer survivors</td>
</tr>
<tr>
<td>Pharmacologists</td>
<td>Pharmacists</td>
<td>Information tech (IT)</td>
</tr>
<tr>
<td>Psychologists</td>
<td></td>
<td>Data-management</td>
</tr>
<tr>
<td>Public health</td>
<td></td>
<td>Legal</td>
</tr>
</tbody>
</table>
Translating intention into action.
Capacity, capability, credibility- sustainable system

Opportunity for a broad range of sectors to contribute and benefit

<table>
<thead>
<tr>
<th>Sector</th>
<th>Goals</th>
<th>The health care system</th>
<th>Tools and methods</th>
<th>Accomplishments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expertise Resource-poor (LMICs) and resource-rich</td>
<td>Capability capacity; sustainable “in-country” cancer program</td>
<td>Underserved community</td>
<td>Mentorship; New career path; Tap into wisdom of retirees</td>
<td>Transform health care value system; Catalytic innovation</td>
</tr>
<tr>
<td>Implementation science</td>
<td>Effective use of knowledge; New systems-solutions to hard problems</td>
<td>New health care models</td>
<td>Quality data bases; Appropriate metrics; Shared learning</td>
<td>Improvements are data driven; Shared solutions; New economic models</td>
</tr>
<tr>
<td>Technology</td>
<td>Best use of personnel; Remote outreach and improved access to care</td>
<td>At cancer center</td>
<td>Novel IT technology; Cell phone for remote outreach</td>
<td>Better health; New jobs; New markets</td>
</tr>
<tr>
<td>Research</td>
<td>Understand diseases; Targeted therapeutics and prevention</td>
<td>Outreach, remote sites</td>
<td>Clinical epidemiology, translational and basic mechanistic research</td>
<td>New knowledge; Better prevention and treatment agents and strategies</td>
</tr>
<tr>
<td>Cancer and health (applicable to NCDs)</td>
<td>Expandable; Exportable models; Shared resources</td>
<td>Ultimate goal: Reduced cancer burden</td>
<td>Shared knowledge; Economic models that support more investment</td>
<td>Common ground; Diplomacy; Shared accomplishments</td>
</tr>
</tbody>
</table>

CN Coleman and RR Love. Sci Transl Med 2014;6:259
Expanding global access to radiotherapy

Our results provide compelling evidence that investment in radiotherapy not only enables treatment of large numbers of cancer cases to save lives, but also brings positive economic benefits.

The verdict is in: the time for effective solutions to the global cancer burden is now

*C Norman Coleman, Bruce D Minsky

Lancet Oncol, 2015, 16: 1146
Think globally, mentor locally.

- International–local in-country partnerships
- Reevaluate problems, processes and partnerships
- Increase local work force size and expertise; achieve consensus on problems
- Scale up and share successful solutions (better cancer care and outcomes)
- Create and conduct investigation of problem-solving solutions

CN Coleman and RR Love. Sci Transl Med 2014;6:259
New partnerships with common goals

Outcome: Bringing together ongoing efforts is critical and is best done with

• formal collaborations among existing programs, allowing for
• individual recognition and a
• range of approaches (i.e. research & implementation science) while
• minimizing potentially detrimental competition that can dissuade investment.

Co-conspirators welcome (iceccancer.org)
New partnerships with common goals

Partnerships are developing and needed among

1. Early stage career cancer experts committed to global health,
2. Retirees seeking opportunities to use their skills to help the underserved; and Senior mentors looking for new challenges
3. Experts in the private practice sector,
4. Organizations interested in supplying refurbished equipment or inventing new equipment, Linear accelerator manufacturers
5. Healthcare workers and agencies addressing health disparities among indigenous populations in resource-rich countries,
6. Government agencies and foundations working to eliminate dangerous nuclear material, especially in unstable countries.
7. VI$IONARIES$ to transform the value system and capturing lost value-
8. INNOVATORS- disruptive and catalytic innovation-

Co-conspirators welcome (iceccancer.org)
“It always seems impossible until it's done.”

Nelson Mandela