

# 9<sup>th</sup> Annual Early Hearing Detection and Intervention Conference

Telehealth:

Where is it going?

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# Learning Objectives

- to learn some of the basics of telehealth
- To obtain a snapshot of a global telehealth perspective
- To learn some of the future directions in telehealth

# What is it?

Telehealth/Telemedicine is

Videoconferencing

Webcasting

Store Forward

Telehomecare

Telephone

etc.

For

Clinical, Administration or education or CPD

# Connectivity

- ISDN vs IP
- Fibre vs satellite
- What is a bridge
- Digital vs analogue
- 128, 256, 384,512 Kpbs or What does it mean

# Where can I connect to?

- Sioux Lookout
- Portable satellite dishes
- Probable but never assume a place has the connectivity

# Establishing a Network

- Routers Hospital vs Network
- Bring in partners (not just one discipline)
- Join a network (audiology)
- Telehealth coordinators, scheduling, bridging etc.

# Funding a Network

- Department of Agriculture

Distance Learning and Telemedicine Grant Program

Current Stimulus funding

(40% Health)

- Health and Human Services (HRSA)

Funds rural and community health

Current Stimulus Funding

# Funding a Network

- Federal Communications Commission

Universal Service Funds

Rural Health Care

- USDA Telemedicine Grants

- Connected Care (UnitedHealth Group and CISCO)

# Funding a Network

- Arizona Telemedicine Network (ATP) received \$1.1M to create the Southwest Regional Telehealth Resource Center that will coordinate telehealth services for Arizona, Colorado, Nevada, New Mexico and Utah
- ATP then links to one national and seven regional resource centers

# Ontario Geographic Comparisons



## France

**Population:** 64,057,790  
**Area:** 643,427 sq km



## Ontario, Canada

**Population:** 12,803,900  
**Area:** 1,076,395 sq km



## Middle East (Egypt, Jordan, Syria, Israel and Lebanon)

**Population:** 118,744,080 (July 2008 est.)  
**Area:** 1,310,100 sq km

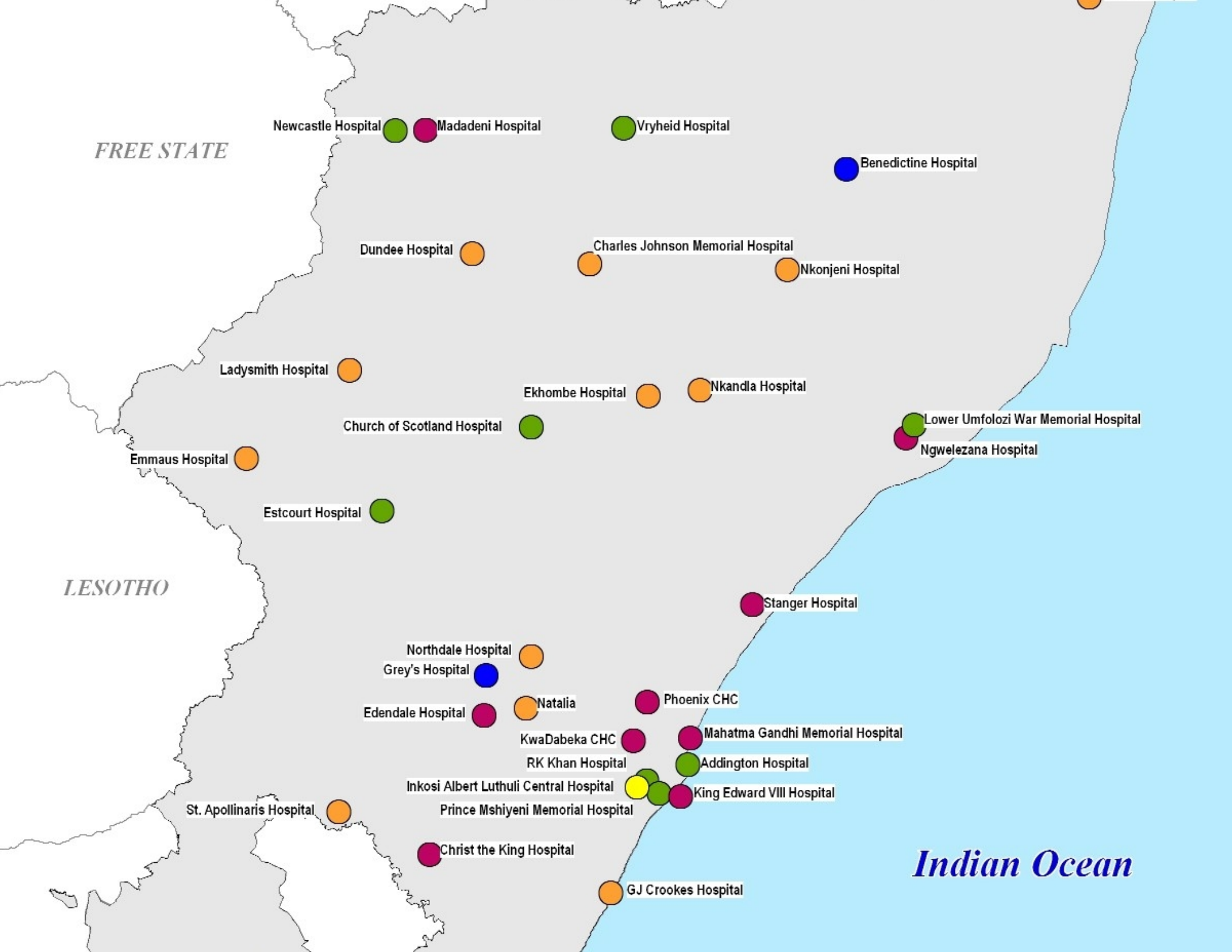
# NORTH Network Sites



● NORTH Network Sites (Sept. 2001)    ■ New NORTH Network Sites  
 — Patient Referral Patterns

# Baycrest Telehealth

- Clinical
- Administration
- CPD
  - city wide programming
  - provincial and national programming
  - international programming



FREE STATE

LESOTHO

Indian Ocean

# Baycrest International Programming

- United States, England, South Africa, WHO in Geneva, South Africa, Romania, Ireland, Argentina, Brazil, Russia, Peoples Republic of China, through out Canada and the Middle East

# Peter A. Silverman Global eHealth Program

- Canada International Scientific Exchange Program (CISEPO) /Baycrest/ Mount Sinai
- Behavioural Neurology Rounds chaired by Drs Morris Freedman and Sandra Black to Israelis, Jordanians and Palestinians

# Telehealth Examples

- Robotic Surgery
- Neurosurgery (Nova Scotia)
- Ship to Shore
- Touching
- NASA Mars Mission

# Monitoring and Evaluation of Programming

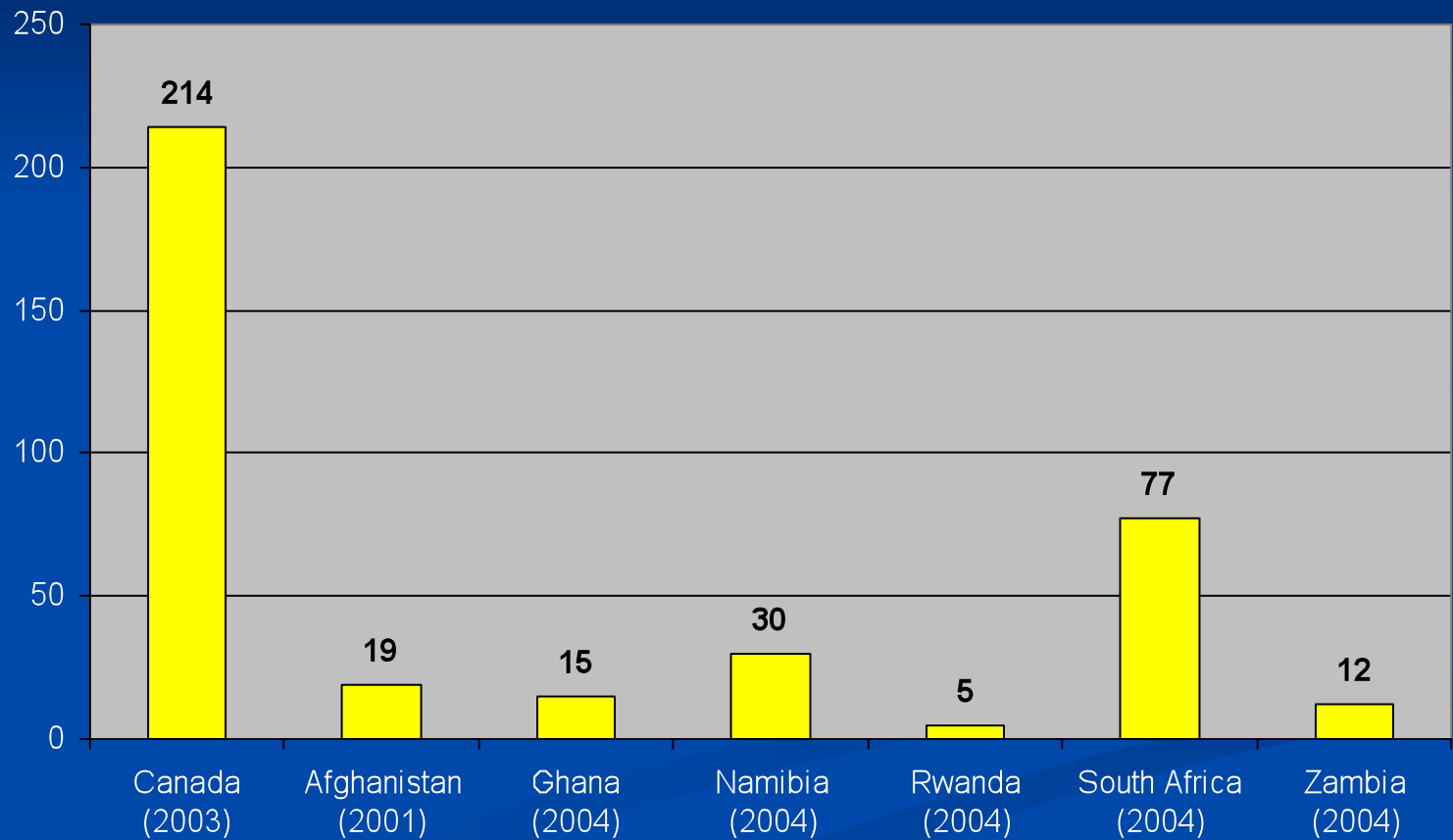
- Don't do “was the broadcast nice”
- Did it
  - Change behaviour
  - Confirm behaviour
  - Act as a catalyst for more questions/research
- The local/regional model has been proved ad infinitum

# Can Telehealth be used as Building Foreign Affairs relationships

- Take continuous learning and adapt it as building healthcare capacity in developing countries while building relationships and trust

# African and Afghani Statistics

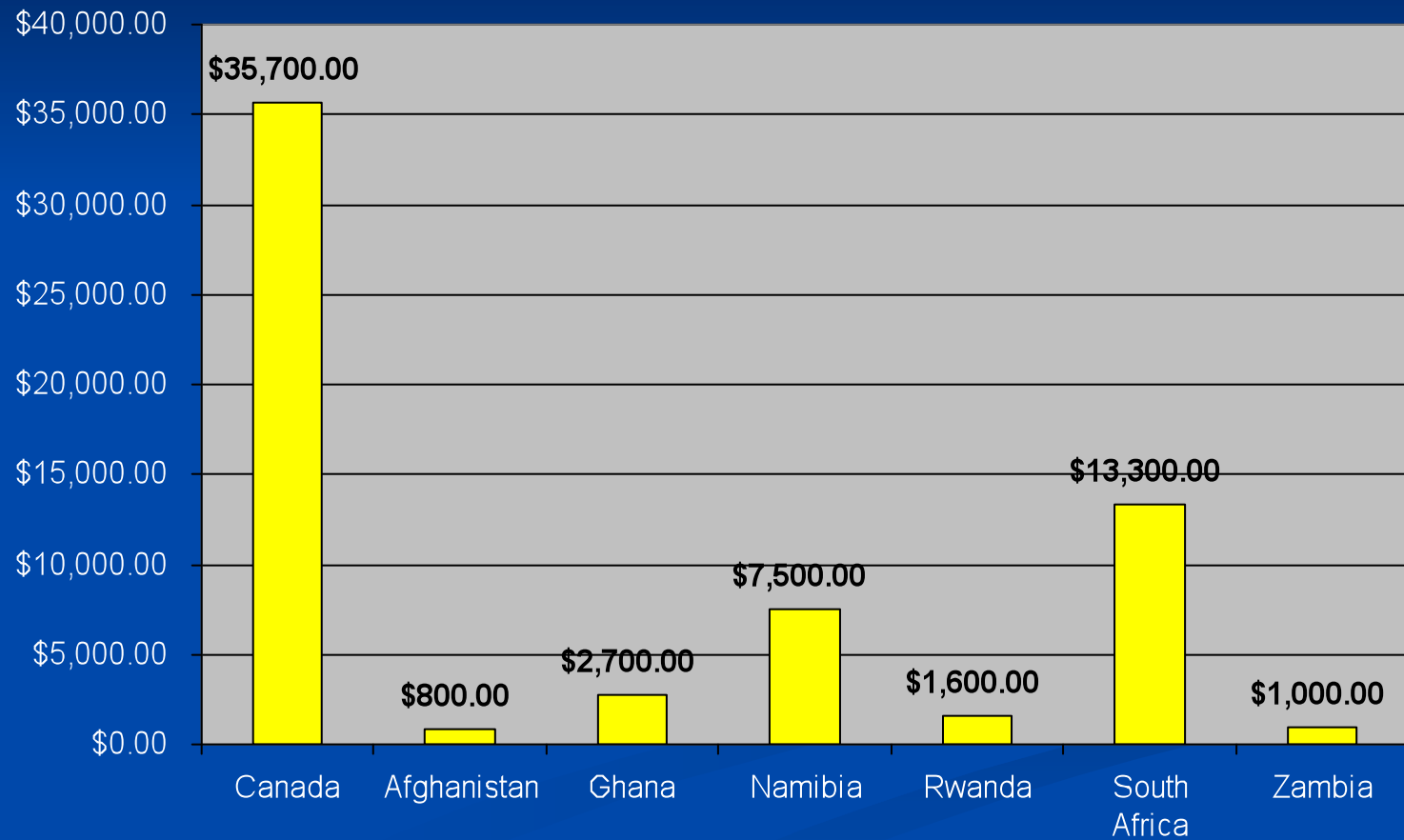
## Physicians Per 100,000 Population (2001 - 2004)



Source: WHO Global Health Atlas

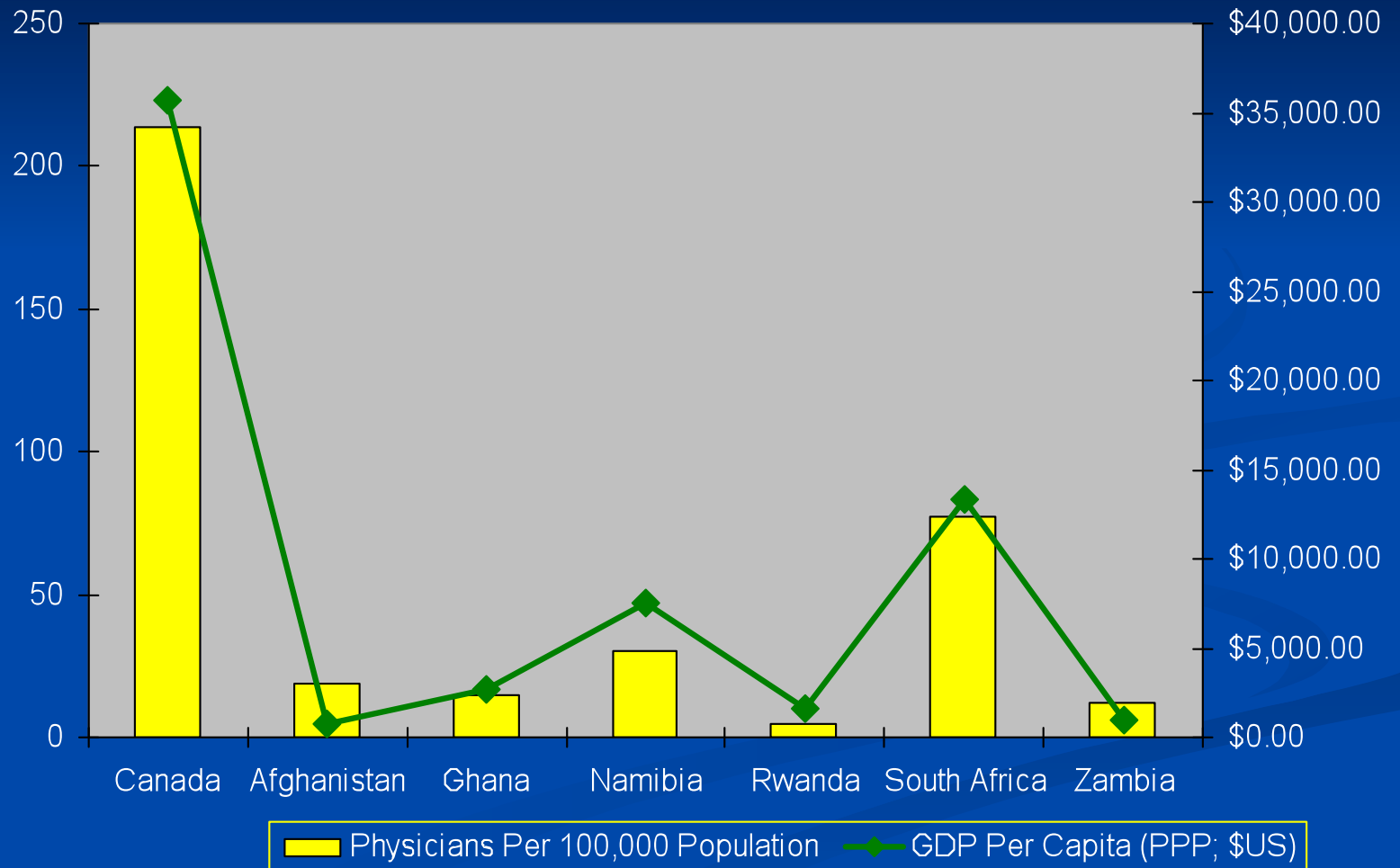
# African and Afghani Statistics

## GDP Per Capita (PPP; \$US; 2006)



Source: CIA, The World Fact Book

# African and Afghani Statistics



Source: WHO Global Health Atlas and CIA, The World Fact Book; 2004-2006

ECONOMIC SUSTAINABILITY IS DEPENDENT  
ON THE AVAILABILITY OF HEALTH  
SERVICES  
REGARDLESS OF THE AMOUNT OF AID

# Canadian Connection Collaboration

- A Canadian led multi government and international foundation initiative utilizing healthcare knowledge transfer between:
  - developing and developed countries and
  - the north and south divide

# Canadian Connection Collaboration Content

- 50 disciplines (medical and allied health clubs) with one hour a month programming
- Content and the per program host sites will be determined by the discipline at a meeting in Geneva hosted by the WHO
- Initial regions are 5 African countries, Israelis, Jordanians and Palestinians with more added post announcement

# Regional Snapshot

- Regional hub has a Director, Administration support, administration supplies, connectivity, videoconferencing unit, a Monitor and Evaluator, computers and free access to medical libraries
- Regional Canadian counterpart for day to day representation

# Country snapshot

- Connectivity to a teaching and to a community hospital
- Videoconferencing unit in each location
- Administration support, administration supplies, connectivity, videoconferencing unit, computers and free access to medical libraries

# Why Middle East

- CISEPO expertise and academic methodology
- Well developed on the ground, capacity building infrastructure
- Peace building results –open line to the Palestinians using healthcare as a common language
- Growth is based on an academic model that facilitates the medical and nursing schools

# Canada International Scientific Exchange Program

- Since 1995 CISEPO has brought together from subspecialty to the community Israelis, Jordanians and Palestinians on an ongoing basis with Canada (CISEPO) as the third party
- Through the academic model has achieved peace building capacity

# Developing Country Benefits

Addresses:

- professional isolation
- medical schools
- Reach out to the community
- HIV/AIDS clinical practice
- Millenium Development Goals
- Create employment and ICT expertise

# Rotary Participation

- Fund raising for on the ground
- Role of the community (health being one aspect)
- education
- Political/community influence
- Linking clubs via videoconferencing

# Programming

- 50 programming series
- Programming input has been received from the Collaboration
- Manpower issue
- New Blood that can provide expertise in a “needs” area of medicine
- Each program series has its own budget and responsibility

# Monitoring and Evaluation

- A Monitoring and Evaluation team has been formed at the beginning of the project composed of Collaboration representation

# Needs Assessment

- Team of 15 people composed of Content and Technical Expertise
- CCC personnel will provide expertise, initiate relationships with their counterparts and most importantly learn

# Future Directions

- Teaching the kids
  - Address the shortage of teachers by linking the hospital connectivity to schools
- Research/Clinical Trials
  - Link specialty and subspecialty disciplines
  - Link other global networks

# CCC Value For Investment

- Creates a mechanism for interdisciplinary relationship building that will lead to further projects
- Build capacity that strengthens stronger relationships and trust
- Create employment and expertise with emerging technology
- Value for emergency and outbreak medicine.

Most Importantly  
It is the right thing to do