Barbados: Paediatric Cancer Care Organization and Governance

Dr. Cheryl Alexis
Facts

- Geographic location: 13°10'N, 59°32'W
- Size: 430 km², 97 km coastline
- Population size: 293,131 (July 2016 est.); 0-14 years: 17.8% (male 26,084/female 26,093), 15-24 years: 12.53% (male 18,236/female 18,477)(2019 est.)
- Ethnicity: Black 92.4%, white 2.7%, mixed 3.1%, East Indian 1.3%, other 0.2%, unspecified 0.2% (2018 est.)
- 11.6 births/1,000 population (2018 est.); population growth 0.26% (2018 est.)

Health

- Expenditure: 7% of GDP (2019)
- GDP per capita 17,758US (2018); 157/196
- Hospital bed density: **5.8** beds/1,000 population (2012)
Policy

National Cancer Control Programme (draft agenda)

- Prevention
- Early Detection
- Diagnosis and Treatment
- Palliative Care
National cancer control plan and partnership

Rapid cancer action plan 2015:
- HPV vaccine uptake
- National cancer screening program (prostate, colorectal, cervical, breast)
- Palliative care for the public sector
- Continue work of tobacco reform (policy ratification)
- Develop “Cancer Control Barbados” (plan and partnership)
Other stakeholders

• Barbados Cancer Society support of tobacco prevention and control initiatives, national screening and diagnosis and the National Cancer Plan for Barbados. **Paediatric arm**

• Cancer Support Services – Family and community support including bereavement counselling, palliative care and some primary care screening

• LIONS – community screening and support for annual World Health Day activities

• Others: Rotary, Kiwanis, Sandy Lane Charitable Trust
Generalised Health Spending  
2016-2017 (US AID)

• Allocation - 75% - curative care. Treatment at hospitals 30%; Other facilities 42%
• Funding – Government 50.9%; Household 42.6%; Employers (insurance) 5.8%; NGOs and Donors <1%
• Providers – Private medical clinics 39.8%; QEH 27.6%; Polyclinics 5.4%
• Out of pocket spending – private facilities 79%; private hospital 5%; QEH private wing 1%, alternative practitioners 10%
• Diseases consuming the most drugs – CVS 16%; Diabetes 13% other NCD 7%
• QEH expenditure $88 million (96% government); Cancer – 5%
Financing on childhood cancer

- Socialised medicine
- Cancer care 100% Government funded
- Full access to all Barbadian children
- Limited Medical aids scheme
- Private charities- some assistance
- Shaw Centre for Paediatric Excellence
Organization of Care
Healthcare at QEH

- 600 beds
- 49 pediatric beds: 28 medical; 17 surgical; 4 PICU
- 2 dedicated ‘isolation rooms’
- Outpatient beds 7’ shared with adults

Service Load
- Average inpatient daily – 2
- Average monthly admissions – 6
- Average daily outpatient – 3
- Annual new cases - 10
Organization of Care

• Referral pattern – established
• Specialist -2 Paediatric Haematologist/Oncologist
• Multidisciplinary specialist care
• Nursing
• Outpatient care mainly
• Inpatient includes 2 ‘isolation rooms’ and PICU
## Cancer care Human Resources

<table>
<thead>
<tr>
<th>Role</th>
<th>Available, works exclusively with PHO service</th>
<th>Available, but not exclusive with PHO service</th>
<th>Moderate availability upon request</th>
<th>Limited availability</th>
<th>Not available</th>
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</thead>
<tbody>
<tr>
<td>Pediatric hematologist/oncologist</td>
<td>1</td>
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<tr>
<td>General pediatrician</td>
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<tr>
<td>Senior Registrars</td>
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<td></td>
<td></td>
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<tr>
<td>General pediatric residents</td>
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<td></td>
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<tr>
<td>PHO-trained nursing staff</td>
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<tr>
<td>Social worker</td>
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<tr>
<td>Pharmacist</td>
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<tr>
<td>Pediatric surgeon</td>
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<tr>
<td>Radiation oncologist</td>
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</table>
Nursing

- 4 trained paediatric haematology/oncology
- Inpatient staffing
  - Oncology ratio – 1 nurse: 2 patients
  - PICU ratio – 1 nurse: 1.5 patients
  - Dedicated once patients admitted
- Continuing education points needed for registration – limited local training
- Participate in rounds and grand rounds and meeting with patients
- Nursing policies being drafted
Other Available Medical care

- Facility for cytotoxic preparation
- Availability of blood products
- Laboratory investigations
- 24 hour access to specialists
- Drug access and availability
Stakeholders for Childhood Cancer Care in Barbados

Major stakeholders for childhood cancer with on-going collaboration

- Sickkids Caribbean Initiative (SCI)
- Children’s charities
- American Society of Hematology
- Shaw Centre for Paediatric Excellence

Roles in the establishment of childhood cancer programs

SCI
- Networking
- Capacity building

Charities
- Financial support
- Emotional support
REGISTRY OUTCOMES
Epidemiological Situation of Pediatric Cancer in Barbados

Data from Registry: January 2012-December 2016

- **Incidence**: 16 cases per 100,000 population; age range 6-16 years, median 11 years, M:F = 1.1:1
- **Most common cancers**: Leukemias 42%, Lymphomas 10.5% and CNS tumors 5%.
- **Adverse Events**: Relapse rate 40%, Progressive disease 13%, Death 27%, abandonment 7%
- **Mortality rate**: 4 cases per 100,000 population
- **2 year overall survival rate**: 69%, 1985-1989: 34%
Acute Leukemias

Demographics

- M:F = 1.2:1
- Age Range = 5 - 18 years
- Median age = 10.6 years
- ALL = 10.5 years;
- AML = 10.8 years
Outcome of the Acute Leukemias

- Alive: 60%
- Dead: 27%
- Unknown: 13%
Response to Treatment

• ALL -80% in remission at the end of induction
• AML -20% in remission after induction; 40% died before
• IHC done on 100% - PreB-ALL 77%; T-ALL – 18%
• Cytogenetics done on 56% (ALL); 20% (AML) - T21
• No CNS or testicular disease at presentation
Information to date

- Older median age
- Delay in referral time
- Delay in time to treatment
- Relapse rate is 50% of adverse events
- Majority of death after 8 weeks into diagnosis
- Acute myeloid Leukemia, 100% mortality
- No death from infection
- Improved overall survival
Gaps in Care

• Obstacles to early diagnosis
  o Delay at Primary level and surgical level
  o Delays in pathology reports
• Staffing - retention
• Psychosocial Support
• Palliative Care
• Limitations:
  o *Diagnostics limited in public sector*
  o *Erratic Drug availability and increased costs*
Needed Support for establishing a childhood cancer program

- Advocacy within the region

- Regional Collaboration in making good healthcare standards similar within the region and in Drug Procurement

- Economics
Conclusions

• No change in incidence of Pediatric cancer in Barbados
• Improvement of survival rate over 2 decades from 34% to 60%
• **Positives**: Registry, access to all to free health care, specialist in the field, positive collaboration with SCI, strong charity support
• **Negatives**: Shortfalls in diagnostic and some therapeutic measures, difficulty with drug procurement, very limited psychosocial support
• **Future**: Advocacy for awareness and financial aid for comprehensive childhood cancer care, Continued capacity building in training, diagnostics and therapeutics, Possible twinning capabilities
“To cure a child with cancer is to save a lifetime.”
THANK YOU