



THE UNIVERSITY OF TEXAS
MD Anderson
Cancer Center
Making Cancer History®

Project ECHO to increase capacity for treatment of cervical dysplasia and cervical cancer in Mozambique

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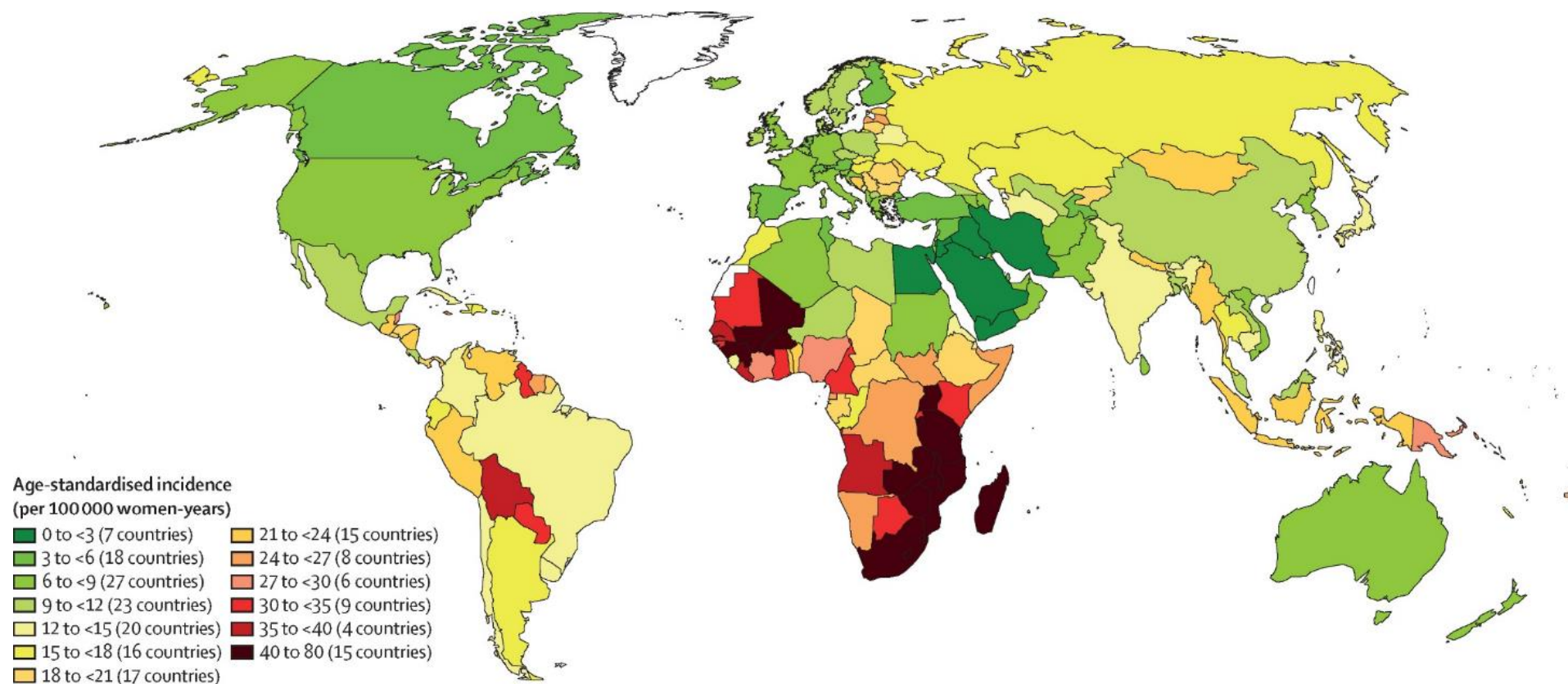
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Project ECHO and Program for Reducing Cervical Cancer at
The University of Texas MD Anderson Cancer Center

Outline

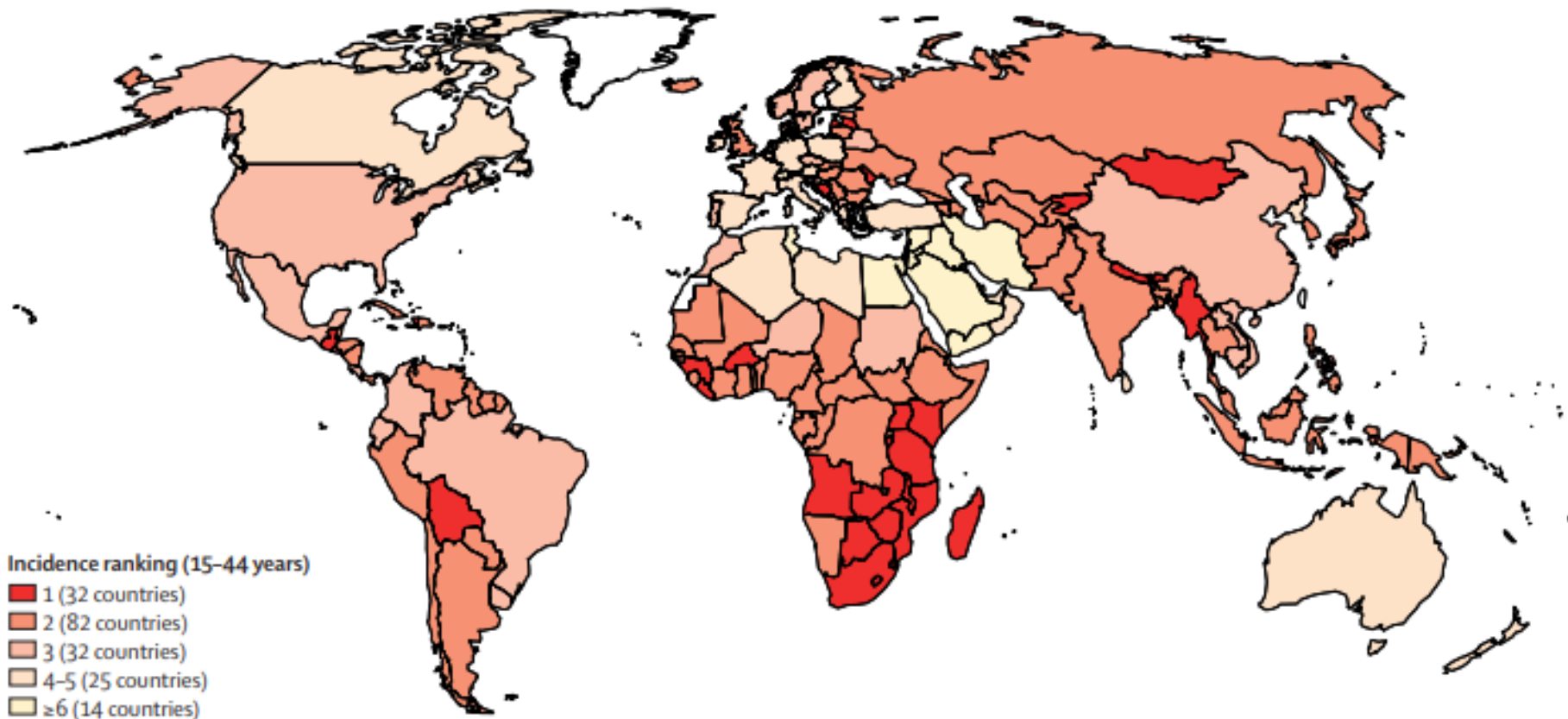
- Background of cervical cancer in Mozambique
- Treatment capacity for cervical dysplasia and cervical cancer in Mozambique
- Advances of prevention and treatment programs in Mozambique
- Project ECHO as a tool to increase clinical capacity in low-resource settings
- Project ECHO cervical cancer prevention program example
- Summary

Age Standardized Incidence of Cervical Cancer



Ranking of cervical cancer incidence in women 15-44 years (2018)

B



Mozambique

- Population: 30 million
- 11 provinces and 128 districts
- Portuguese + 40 native languages
- Life expectancy: 62 years (women)
- Below poverty line: 55%
- Literacy rate: ~60%
- HIV prevalence: 12% (>20% in urban areas)
- High rates of cervical cancer



Cervical Cancer in Mozambique

Cervical cancer is the #1 cancer among women in Mozambique

Incidence: 42.8/100,000

Mortality: 35.7/100,000

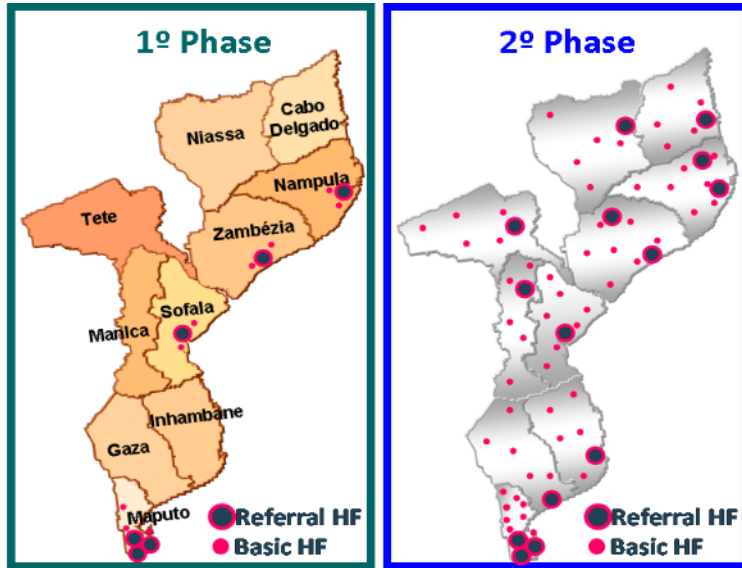
- Represents 34% of all cancer diagnoses in women
- >5,500 cases and >3,500 deaths per year
- Most women present with advanced disease



Clinical infrastructure in Mozambique

Human Resources	Infrastructure for treatment/prevention
<ul style="list-style-type: none">• 13 pathologists• 3-5 medical oncologists• ~70 Ob-Gyns• No gynecologic oncologist• No surgical oncologists• 150 new doctors graduate annually	<ul style="list-style-type: none">• No HPV Vaccine• External beam radiation• No brachytherapy

National cervical cancer screen and treat program



Women 25-54, every 3 years
Visual Inspection with Acetic Acid (VIA) and Cryotherapy

Partners:

USAID, CDC, MCHIP, FGH, ICAP
Elizabeth Glaser, UNFPA, WHO

- *Fewer than 5% of women in Mozambique have ever been screened for cervical cancer
- Many smaller health centers still lack basic tools needed for screening (speculums)

*Brandao, 2018

Colposcopy, Ablation and LEEP

Diagnosis and treatment of pre-invasive cervical disease



Screening and treatment of pre-invasive cervical disease

In 2016

- ~150 health centers performing screening (VIA) and cryotherapy
- Women referred for excision (LEEP) of the pre-cancerous lesion were LTFU
- There were ~7 LEEP machines in the country
- Almost no gynecologists were performing LEEP
- Few functional colposcopes

Screening and treatment of pre-invasive cervical disease

In 2020

- Support and coordination from the Ministry of Health and the First Lady of Mozambique
- Hands-on training and Project ECHO programs on-going
- Women referred for LEEP are evaluated and treated at some locations
- Most provinces have functioning equipment
- Cadre of Mozambican gynecologists who now serve as mentors and instructors in diagnosis and treatment of pre-invasive cervical disease

Diagnosis and Treatment of Cervical Cancer

Prior to 2017:

- No gynecologic oncologist in Mozambique
- No surgical treatment available for women with cervical cancer
- No radiotherapy
- Limited access to palliative care services

Diagnosis and Treatment of Cervical Cancer

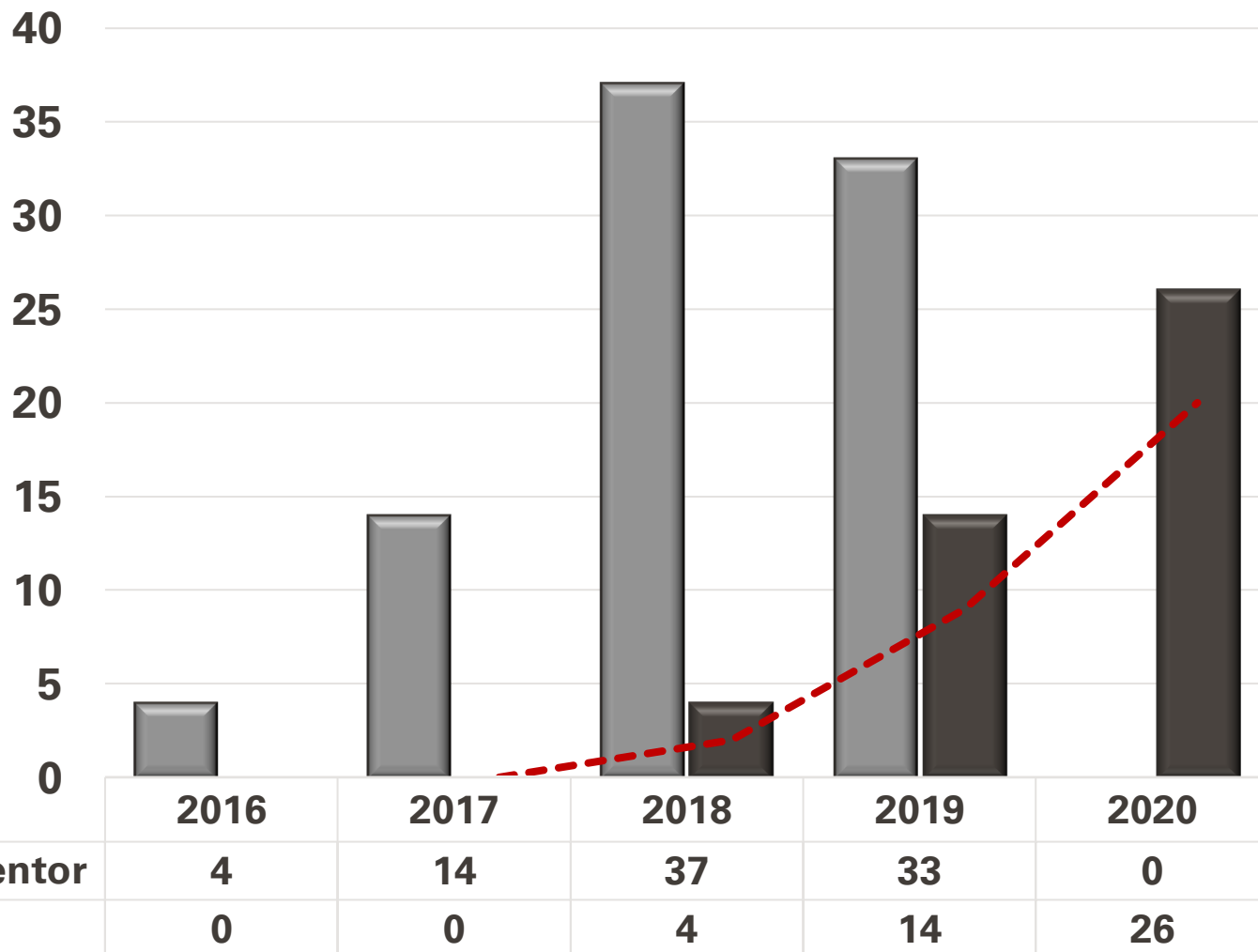
After 2017:

- Comprehensive two-year education and training program in gynecologic oncology
- Three gynecologists paired with five specialists from Brazil
- Defined and established curriculum
- Regular visits for clinical training and surgery
- Monthly virtual tumor boards (Project ECHO)
- International support from specialists
- Regular assessments and a final exam





Gynecologic surgeries completed (CY 2016 – CY 2020)



Diagnosis and Treatment of Cervical Cancer

After 2017:

Many challenges still remain

- Treatment only available in Maputo
- Brachytherapy not yet available
- Not all chemotherapy drugs available
- Eventually build a complete training program within Mozambique
- Eventually offer treatment outside of Maputo



Increasing treatment capacity requires a comprehensive strategy

Provider Capacity Building

- Hands-on surgical training
- Colposcopy/LEEP courses
- Gynecologic Oncology training (IGCS) and mentorship

Project ECHO

- Regular video-conferences with case-based discussions

Affordable Technologies and Research Capacity

- HRME (High Resolution Micro-endoscopy)
- POC HPV testing
- Mobile ODT
- Integrative cervical cancer screening models

Health System Strengthening

- Health Policy
- Partnerships with MOH
- NCI Center for Global Health collaboration
- Development of national cancer control plans
- African First Ladies

ECHO: Extension for Community Healthcare Outcomes

“In the U.S. and around the world, people are not getting access to the specialty care they need, when they need it, for complex and treatable conditions”

-Sanjeev Arora



Background: Hepatitis C in New Mexico

- 121,256 mi
- Population - 2.08 million
- Estimated > 28,000 people infected with HCV
- In 2004 less than 5% had been treated
- 2,300 prisoners were HCV positive (~40% of those entering the corrections system), none were treated
- **No primary care physicians treating HCV as of 2004***

*Project ECHO Goal:
Demonopolize knowledge



Background: Outcomes of Hepatitis C pilot study

- Mentoring program using technology and case-based learning
- Prospective study of 407 patients with HCV
- Compared patients treated at the University with patients treated at 21 rural clinics/prisons
- No difference in Hepatitis C cure rates (SVR) between the two groups
- No significant differences in serious adverse events between UNM and rural clinics
- Improved patient satisfaction and physician and provider self-efficacy

Table 2. Sustained Virologic Response According to Genotype and Site of Treatment.*

HCV Genotype	ECHO Sites <i>no. of patients with response/total no. (%)</i>	UNM HCV Clinic	Difference between ECHO Sites and UNM HCV Clinic <i>percentage points (95% CI)</i>	P Value
All genotypes	152/261 (58.2)	84/146 (57.5)	0.7 (–9.2 to 10.7)	0.89
Genotype 1	73/147 (49.7)	38/83 (45.8)	3.9 (–9.5 to 17.0)	0.57
Genotype 2 or 3	78/112 (69.6)	42/59 (71.2)	–1.5 (–15.2 to 13.3)	0.83

Benefits of Project ECHO for participants

- Professional interaction with colleagues in different locations, including academic centers
- Mix of work and learning
- Learning from each other
- Access to specialty consultations
- Long term impact to become local experts



ECHO is a Force Multiplier

Telemedicine

Provider to Patient Communication^{vs.}



Telehealth/mentoring

Provider to Provider
Mentoring



Force multiplier

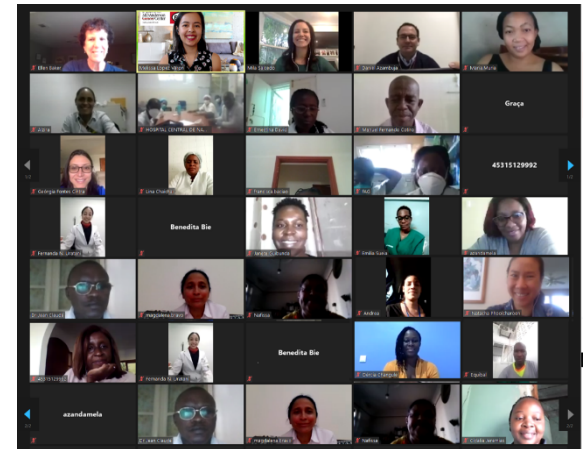
ECHO moves knowledge, not people



- To become an ECHO hub, an institution must:
 - Sign an agreement with the ECHO Institute
 - ECHO staff must receive training.

Project ECHO Program for Cervical Cancer Prevention in Mozambique

- **Format:** Regular sessions conducted in Portuguese, once a month since January, 2019.
- **Collaborators:** Brazilian mentors, Mozambique's MOH and clinicians in all 11 provinces in Mozambique
- **Average attendance since 2019:** 20 participants per session
- **Area of focus:** Cervical cancer prevention and management of women with abnormal screening results
- **Mentoring:** Hands on training courses for Colposcopy and LEEP and technical support

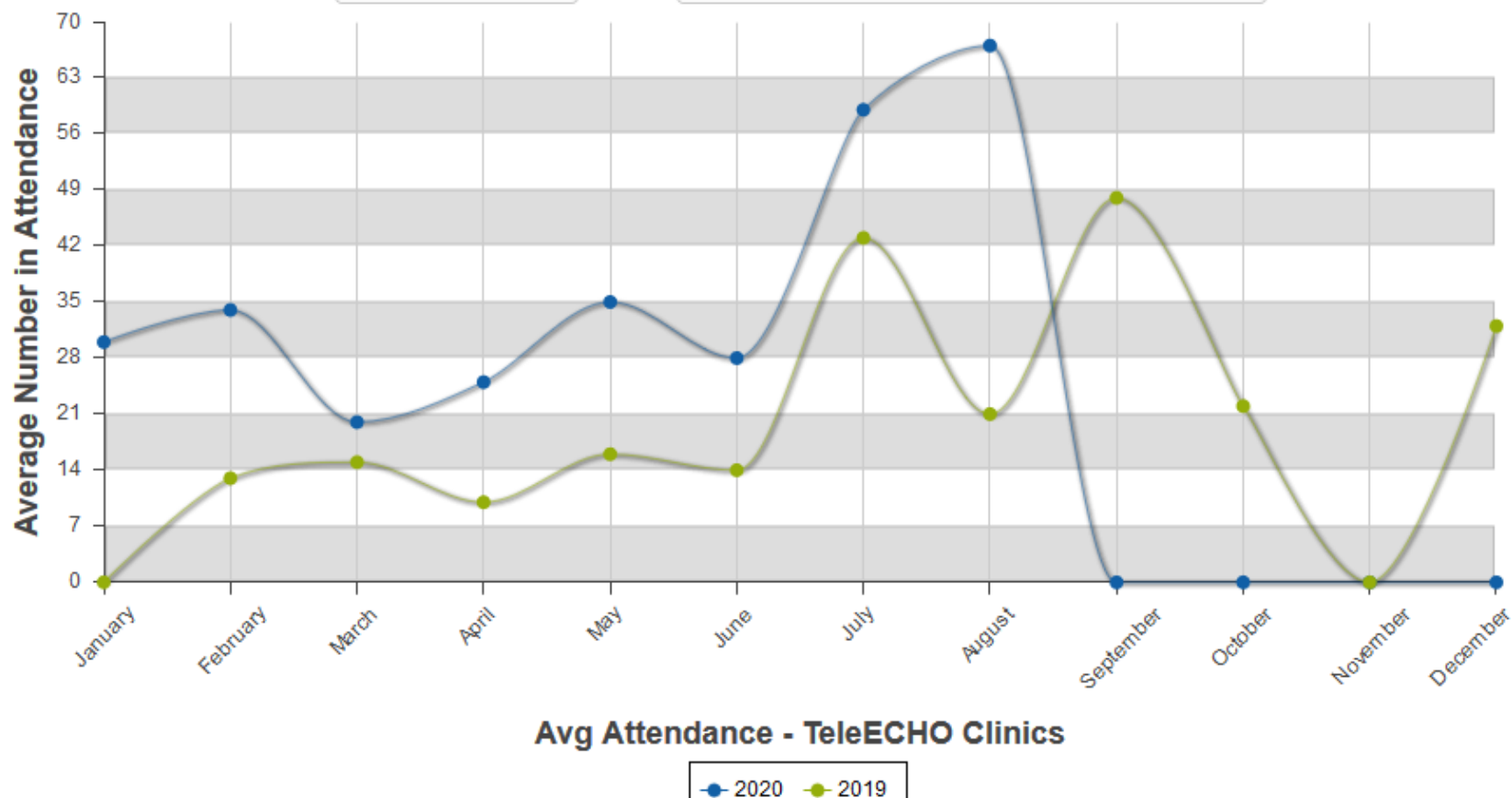


Attendance summaries, Cervical Cancer Prevention Mozambique

DASHBOARD: Average Attendance by Month

Years: 2 selected

Clinics: Mozambique Cervical Cancer Prevention



Capacity Building for Treatment of Cervical Dysplasia and Cervical Cancer

Hands-on Training:

- Surgical/medical oncology
- Technical courses
 - Colposcopy, LEEP



Trainee Exchanges:

- Brazil and Mozambique

IGCS Global Curriculum:

- 2-year training program in Gynecologic Oncology
- Twinning approach
- Training 3 doctors in gynecologic oncology at HCM



What makes a successful Project ECHO program?

Participants:

- Enthusiasm and collaboration
- Interest in learning
- Interest in developing new skills
- Support from institution

ECHO hub/faculty:

- Enthusiasm
- Clinical expertise
- Humble approach and excellent communication skills
- Interest in learning from partners

Summary

- Project ECHO has an important role in capacity building for treatment of cervical dysplasia and cervical cancer in Mozambique
- Project ECHO is one of multiple intervention strategies to address cervical cancer capacity in Mozambique
- It takes time to build relationships in a distance, but ECHO accelerates and maintains this process

If interested in exploring Project ECHO

- Review ECHO partnership agreements
- Find faculty and participant champions
- Observe a Project ECHO session (with potential partners)
- Get trained, Let us know how we can help

Consortium Partners

- MD Anderson Cancer Center
- Brazilian Sister Institutions and Affiliates:
 - Barretos Cancer Hospital
 - AC Camargo Cancer Center
 - Hospital Israelita Albert Einstein
 - Santa Casa de Misericórdia de Brazil
- Universidade Eduardo Mondlane (UEM)
- Mozambique Ministry of Health (MISAU)
- Population Services International (PSI)
- Rice University
- Albert Einstein College of Medicine
- The International Gynecologic Cancer Society (IGCS)
- Clinton Health Access Initiative (CHAI)
- Bush Institute
- US Government

Thank you



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Questions about Project ECHO visit www.ECHO.unm.edu