IMPROVING ANATOMIC PATHOLOGY IN SUB-SAHARAN AFRICA TO SUPPORT CANCER CARE

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African Strategies for Advancing Pathology
Overview of African Strategies for Advancing Pathology

- Denver-based non-profit organization formed in 2014

- Membership organization focused on building capacity for pathology services to support cancer in sub-Saharan Africa

- Current membership: 29 members from the US, UK, Europe, Australia, and sub-Saharan Africa

- All members have extensive experience working in Africa
What is pathology?

- The science of the cause and effect of diseases
- The branch of medicine that deals with the laboratory examination of samples of body tissue for diagnostic purposes
- Pathology in support of cancer care
NCI PAR 15-155: Improving Anatomic Pathology in sub-Saharan Africa to Support Cancer Care

- Research project funded by the National Cancer Institute

- Goal: To determine which training approach is most effective at improving the expertise of the pathology workforce in low and middle income countries (LMICs) in sub-Saharan Africa, and share the lessons learned to contribute to future training efforts.
METHODS

- Three workshops held in January 2016, May 2016, and January 2017
- 16 participating pathology departments; 52 total participants
- Four common cancers (breast, cervix, prostate, colorectal) presented at each workshop
- Each workshop featured a different teaching style
- Pre / Post workshop online institutional assessments
- Pre / Post workshop participant assessments
- Institutional site-visits
Project Timeline

**October '15**

**November '15**

**December '15**

**January '16**

**February '16**

**March '16**

**April '16**

**May '16**

**June '16**

**July '16**

**August '16**

**September '16**

**October '16**

**November '16**

**December '16**

**January '17**

**February '17**

**November '17**

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**BLENDED WORKSHOP**

**DISSEMINATION OF PRE-ONLINE ASSESSMENT TO INSTITUTION GROUP 1**

**SITE VISITS TO INSTITUTION GROUP 1 / DISSEMINATION OF PRE-ONLINE ASSESSMENT TO INSTITUTION GROUP 2**

**LECTURE BASED WORKSHOP**

**DISSEMINATION OF POST-ONLINE ASSESSMENT TO INSTITUTION GROUP 1**

**CASE-BASED WORKSHOP**

**DISSEMINATION OF POST-ONLINE ASSESSMENT TO INSTITUTION GROUP 2**

**SITE VISITS TO INSTITUTION GROUP 2**

**DISSEMINATION OF PRE-ONLINE ASSESSMENT TO INSTITUTION GROUP 3**

**DISSEMINATION OF POST-ONLINE ASSESSMENT TO INSTITUTION GROUP 3**

**BLENDED WORKSHOP**
Participating Institutions

- Moi Teaching and Referral Hospital
- Aga Khan University Hospital, Kenyatta University
- College of Health Sciences, Makerere University
- Rwanda Military Hospital / University Teaching Hospital of Butare
- University Hospital of Kamenge (CHUK)
- University Teaching Hospital Lusaka
- College of Health Sciences, University of Zimbabwe
- University of Botswana
- Maputo Central Hospital
- Malawi College of Medicine
- University Teaching Hospital Antananarivo
- Muhimbili University of Health and Allied Sciences / Muhimbili National Hospital, Aga Khan Hospital
- University of Botswana
<table>
<thead>
<tr>
<th>DIDACTIC / LECTURE-BASED</th>
<th>CASE-BASED TRAINING (CBT)</th>
<th>BLENDED APPROACH</th>
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<tbody>
<tr>
<td>• Powerpoint Presentations</td>
<td>• No lectures presented</td>
<td>• 30-45 minute lecture for each cancer type emphasizing the most important information for solving the case</td>
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<tr>
<td>• 3-4 lectures for each cancer type</td>
<td>• 2-7 cases per cancer type</td>
<td>• Same cases from the CBT, in a shorter time frame</td>
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<td>• Lectures harmonized in total duration and overall structure</td>
<td>• PowerPoint presentations from the didactic workshops were available as reference material</td>
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<td>• Faculty conducted summation session after each cancer session</td>
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RESULTS

- Workshop Post-Assessment Average Scores:
  - Didactic: 63%
  - CBT: 76%
  - Blended: 68%
- The improvement in scores from the pre-assessment to the post-assessment for both the CBT and blended workshops was 19%
- 86% of survey respondents reported that they perceive changes at their institutions that they attribute to participating in the workshops
- Those variables which exhibited an increase in reporting across all institutions from the pre-workshop online survey to the post-workshop online survey were those institutions which:
  - Have a tumour board;
  - Routinely obtain second opinions for new cancer diagnoses;
  - Have histology lab procedure manuals;
  - Monitor and report ischemic time for breast biopsies;
  - Monitor and report time of fixation for breast biopsies;
  - Routinely sample 12-15 lymph nodes from resection specimens for colon cancer;
  - Routinely use synoptic reports; and,
  - Routinely assign Gleason scores.
CONCLUSIONS

- Participants seemed most engaged during the blended workshop.

- Participants seemed more enthusiastic and invested when working through cases.

- The training conducted at the workshops has contributed to a higher performing pathology workforce and the improvement of anatomical pathology laboratories in the participating institutions.
NEXT STEPS

- Expand the courses to be held more frequently and cover a wider range of topics
- Use an approach designed to maximize program reach and minimize costs while incorporating a blended teaching approach
- Hold local / regional workshops that require less participant travel
- Involve more local experts
- Have an ongoing mentorship program for pathologists and senior residents from LMICs
QUESTIONS?

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