

Audience	Activities	Enablers/Barriers	Outputs	Outcomes	IMPACT
<p><b>Fellows</b></p>	<p><b>FETP TRAINING</b></p> <p>Deliver competency-based training and opportunities to apply learnings</p> <p><i>[See Strategies in aFETP Theory of Change]</i></p>	<p><b>Enablers</b></p> <ul style="list-style-type: none"> <li>• Competency based training<sup>1</sup></li> <li>• Fellows knowledge &amp; skills at entry to program<sup>2</sup></li> <li>• Recruiting 'ideal' candidates - learner characteristics<sup>2</sup> e.g. personal motivation of Fellow <sup>2,3</sup></li> <li>• Key stakeholders support &amp; fund program</li> <li>• Co-designed curriculum<sup>1,4</sup></li> <li>• Program and curriculum design based on needs assessment and aligned to local priorities<sup>1,2</sup></li> <li>• Local ownership &amp; local leadership of the program<sup>1,5</sup></li> <li>• Cultural and contextual adaptation of training materials<sup>5</sup></li> <li>• Supportive fellows network</li> <li>• Local faculty available, skilled and motivated to identify, train and mentor fellows</li> <li>• International experts available to train and support local faculty as needed</li> <li>• Skilled trainers</li> <li>• Funding source – internal/external/sustainable<sup>6</sup> [C3]*</li> </ul> <p><b>Barriers</b></p> <ul style="list-style-type: none"> <li>• Poor training facilities or training conditions</li> <li>• Competing work priorities and demands limiting availability of fellows and faculty</li> <li>• Diversion of faculty and fellows due to outbreak or emergency response, e.g. Covid<sup>7</sup></li> </ul>	<p><b>Training participation</b></p> <ul style="list-style-type: none"> <li>• Gender breakdown of fellows <sup>6</sup>[C1.2 p13]</li> <li>• # fellows enrolled in training by role, position and workplace location</li> <li>• # fellows who drop out of training</li> <li>• # fellows linked with public health mentors<sup>8</sup></li> <li>• # classroom hours<sup>9</sup></li> <li>• # months length of field assignment<sup>9</sup></li> <li>• % of health workers trained [p71]<sup>10</sup></li> </ul> <p><b>Training quality</b></p> <ul style="list-style-type: none"> <li>• # fellows reporting enjoyable learning experience [UON]**</li> <li>• # fellows reporting training relevance to current role [UON]</li> <li>• Improved field epi competencies (skills and knowledge)</li> <li>• Accredited training program</li> <li>• # of levels of training ie frontline, intermediate and/or advanced<sup>9</sup></li> </ul>	<p><b>Trained Field Epi workforce</b></p> <ul style="list-style-type: none"> <li>• Key Field Epi competencies achieved</li> <li>• Fellows demonstrate the application of field epi competencies throughout the training</li> </ul> <p><b>Contributing Field Epi workforce</b></p> <ul style="list-style-type: none"> <li>• Fellows implement and evaluate an evidence-based intervention</li> <li>• Fellows improve a surveillance system or component of a surveillance system</li> </ul>	

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<p><b>Graduates</b></p>	<p><b>PLACEMENT</b></p> <p>Placement of graduate field epis across tiered health system</p>	<p><b>Enablers</b></p> <ul style="list-style-type: none"> <li>• Sustained mentorship and supervision<sup>1</sup></li> <li>• Strong networks<sup>11,12</sup></li> <li>• Supportive workplace [UON]</li> <li>• Motivated graduate [UON]</li> <li>• Delineated role of field epidemiologist in health system</li> </ul> <p><b>Barriers</b></p> <ul style="list-style-type: none"> <li>• Fellows’ line managers do not understand/appreciate the role of a field epi [UON]</li> </ul>	<p><b>Graduates</b></p> <ul style="list-style-type: none"> <li>• # graduates completing training by role, position and workplace location<sup>9</sup></li> <li>• Gender breakdown of graduates</li> <li>• % of districts / provinces with graduates</li> <li>• % graduates retained within public service</li> <li>• % graduates receiving a promotion</li> </ul> <p><b>Alumni network</b></p> <ul style="list-style-type: none"> <li>• Formalised, active network of Field Epi Alumni– graduates, mentors, fellows<sup>10</sup> [p86], <sup>1</sup>, Error! Bookmark not defined., Error! Bookmark not defined.</li> <li>• # of graduates presenting work at national, regional, international meetings/conferences<sup>12</sup>, [UON]</li> <li>• # of graduates who are members of national, regional, international working groups on public health priority areas [UON]</li> <li>• # graduates completing higher level training / professional development<sup>12</sup>Error! Bookmark not defined., [UON]</li> </ul>	<p><b>Skilled Field Epi workforce</b></p> <ul style="list-style-type: none"> <li>• Graduates are confident in their skills<sup>8,11,13</sup></li> <li>• Graduates using evidence- based decision making<sup>5,8,11-13</sup> SDG3.c –development, training and retention of the health workforce in developing countries, IRIS+theme10]</li> <li>• Graduates employed in positions where field epi knowledge/skills required</li> <li>• Graduates provided opportunity to apply skills/knowledge in workplace</li> <li>• Graduates confident in applying skills and knowledge in workplace</li> </ul> <p><b>Contributing Field Epi graduates</b></p> <ul style="list-style-type: none"> <li>• Graduates are introducing innovations <sup>11,12</sup></li> <li>• Graduates are visible/ influential<sup>5,8,11,14</sup></li> <li>• Graduate activities (research, reports, presentation etc) are considered by decision makers to inform the development and implementation of a policy, program or project that inform/influence decisions and the environment in which decisions are made<sup>15</sup></li> <li>• Graduates demonstrate transfer of knowledge and skills to others [UON]</li> <li>• Graduates are promoted to senior decision-making roles in applied public health [UON]</li> <li>• Graduates demonstrate transfer of knowledge &amp; skills to others [UON]</li> <li>• Active alumni network across all levels of government provides ongoing peer-peer support<sup>8,10</sup> [p86]<sup>4,11,13</sup></li> </ul>	

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<p><b>Public Health System</b></p>	<p><b>DEPLOYMENT &amp; DEVELOPMENT of graduates</b></p> <p>Application of field epidemiology skills to strengthen health systems and respond to public health threats</p>	<p><b>Enablers</b></p> <ul style="list-style-type: none"> <li>• Support from alumni network/fellow health care workers<sup>3</sup> [#1 enabler response]</li> <li>• Sustained mentorship and supervision<sup>1</sup></li> <li>• Support from managers &amp; other government stakeholders<sup>3</sup></li> <li>• Adequate infrastructure, resources and supplies to deliver public health programs<sup>1,5</sup></li> <li>• Graduates are in decision-making roles [UON]</li> </ul> <p><b>Barriers</b></p> <ul style="list-style-type: none"> <li>• Lack of or weak public health systems [UON]</li> <li>• Lack of leadership in public health [UON]</li> <li>• Complicated processes that restrict public health action [UON]</li> </ul>	<p><b>Field Epi health workforce</b></p> <ul style="list-style-type: none"> <li>• Career trajectory of graduates<sup>11,16</sup> [D1]</li> <li>• # of Graduates placed across different tiers of health system</li> <li>• # faculty (including trainers and mentors) who are FETP graduates<sup>4,8,14</sup></li> </ul> <p><b>Operational research and health systems strengthening</b></p> <ul style="list-style-type: none"> <li>• Scientific rigor statistical skills, reports, surveillance system, research etc<sup>11</sup></li> <li>• Systematic analysis of surveillance data<sup>4,10</sup> [p75] data analysis standards, guidelines, training, tools, teams, continuous quality improvement of data quality</li> <li>• # of research studies/Field Investigation completed<sup>4</sup></li> <li>• # of epidemiological reports/Policy briefs written<sup>4</sup></li> <li>• # of scientific presentations and publications<sup>12</sup></li> <li>• # of operational research projects conducted</li> <li>• # of evidence-based interventions implemented</li> <li>• # program recommendations made and implemented<sup>10</sup></li> <li>• # policies updated or developed</li> <li>• # and type of workplaces processes / procedures improved</li> </ul>	<p><b>Experienced Field Epi workforce</b></p> <ul style="list-style-type: none"> <li>• Established career pathway for graduates</li> <li>• Long-lasting partnerships and communities of practice<sup>1</sup></li> <li>• Stronger teams<sup>12</sup></li> <li>• Graduates in leadership roles in public health service across all tiers of government<sup>4,8,14</sup></li> <li>• Skills are maintained and continually applied<sup>5</sup></li> <li>• Key disease control and surveillance positions at all tiers of government are occupied by FETP graduates</li> <li>• Decision makers confident in and engaged with graduates and the services they provide<sup>8,11</sup></li> <li>• Decision makers utilize the evidence generated by graduates to improve public health programming</li> <li>• Graduates are public health influencers in their workplace and the communities they serve</li> </ul> <p><b>Field Epi graduates contributing to operational research and health system strengthening</b></p> <ul style="list-style-type: none"> <li>• Graduates routinely conduct operational research to understand and address key public health challenges</li> <li>• Graduates routinely design and implement interventions to address key public health challenges</li> <li>• Graduates actively work on strengthening health systems [UON]</li> <li>• Graduates effectively engage with communities when planning and delivering public health programs</li> <li>• Decision makers engage with recommendations made by graduates</li> <li>• Graduates make contributions to health evidence</li> <li>• Evidence based decision making informing guidelines, policy &amp; programmatic activities [UON/SPAR]</li> <li>• Graduates design and implement public health interventions to improve public health program delivery</li> </ul>	<p><b>Evidence based decision making</b></p> <ul style="list-style-type: none"> <li>• Evidence based decision making driving public health system<sup>8,11,17</sup></li> <li>• Implementation of research findings and evidence-based approaches into routine practice<sup>15</sup></li> <li>• Health systems and programs strengthened based on evidence generated by graduates</li> </ul> <p><b>Strengthened public health programming</b></p> <ul style="list-style-type: none"> <li>• Health system responds to public health needs resulting in improvements to key performance indicators [PNG 11],<sup>8</sup></li> <li>• Public health programming integrated across tiers of health system [PNG 11],<sup>8</sup></li> <li>• Health programs strengthened at facility level</li> <li>• Strong public health leadership at all tiers of health system [UON]</li> <li>• Health programs are systematically conducted with community understanding, support and cooperation</li> </ul>

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<p><b>Public Health System</b></p>			<p><b>Surveillance and outbreak response</b></p> <ul style="list-style-type: none"> <li>• # surveillance key performance indicators improved (e.g report timeliness and completeness)</li> <li>• # of disease surveillance systems evaluated</li> <li>• # of disease surveillance systems strengthened</li> <li>• # of outbreaks detected from surveillance</li> <li>• # and type of outbreaks responded to</li> </ul> <p><b>Sustainable national field epi training program</b></p> <ul style="list-style-type: none"> <li>• Field epi recognized in national strategic health plan</li> <li>• # Program staff employed by FETP</li> <li>• % of FETP activities funded by national government</li> <li>• % faculty undertaking professional development to improve their training / mentoring</li> </ul>	<p><b>Field Epi graduates contributing to surveillance and outbreak response</b></p> <ul style="list-style-type: none"> <li>• Graduates are driving innovation and service improvements<sup>11</sup></li> <li>• Graduates actively participating in indicator-based and event-based surveillance</li> <li>• Surveillance system supported by graduates are efficient and functional<sup>18,12</sup></li> <li>• Improved data quality and timeliness leads to improved response to alerts<sup>12</sup></li> <li>• Graduates lead outbreak response activities within their jurisdiction</li> <li>• Graduates support outbreak response activities outside their jurisdiction (eg deployed to another province etc)</li> <li>• Graduates lead or support multi-sectoral outbreak response (rapid response) teams<sup>6</sup>[C6.1/6.2 p26-27]</li> <li>• Graduates effectively engage with communities when investigating outbreak<sup>6</sup> [10.3 p40]</li> </ul> <p><b>Field Epis contributing to workforce development</b><sup>10</sup>[p77]<sup>18</sup>[UON]</p> <ul style="list-style-type: none"> <li>• Graduates comprise core FETP faculty and deliver high quality training and mentoring</li> <li>• Graduates develop and deliver public health training activities to workplace colleagues and staff</li> <li>• FETP program run &amp; delivered by country staff without the need for external support</li> <li>• Established pathway for FETP graduates to become faculty</li> <li>• FETP program runs a training cohort every year</li> <li>• FETP program has strong networks with other FETP's in region</li> <li>• FETP program receives TEPHINET accreditation</li> <li>• Faculty, graduates &amp; fellows connected with national, regional international field epi networks</li> <li>• Faculty continue to seek out &amp; engage in ongoing professional development</li> </ul>	<p><b>Strengthened surveillance and outbreak response systems</b></p> <ul style="list-style-type: none"> <li>• Strong national disease surveillance systems consistently supports the early detection of outbreaks &amp; response to public health alerts [UON],<sup>6</sup> [C5 p24]</li> <li>• Response teams mobilise to investigate outbreaks in a timely manner, interrupting disease transmission</li> <li>• Outbreak response activities systematically conducted with community understanding, support and cooperation<sup>6</sup>[C10.3 p40]</li> </ul>

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Community	<p><b>CAPABLE, RESOURCED HEALTH SYSTEM</b></p> <p>Integrated health system. Responsive &amp; effective health service.</p>	<p><b>Enablers</b></p> <ul style="list-style-type: none"> <li>• Links between primary health services and community-based individuals and organizations</li> <li>• Resources available to permit community-based programming</li> <li>• Time spent investing in relationships, including providing data feedback</li> </ul> <p><b>Barriers</b></p> <ul style="list-style-type: none"> <li>• Limited access to remote communities</li> <li>• Poor or no connectivity with remote communities</li> </ul>	<ul style="list-style-type: none"> <li>• # of community based public health outreach programs conducted</li> <li>• # community engagement activities</li> <li>• # community awareness activities</li> </ul>	<p><b>Community residents</b></p> <ul style="list-style-type: none"> <li>• Community voice and choice in decision making process of community level public health measures<sup>6</sup> [C10.3 p40]</li> <li>• Improved access to public health services</li> <li>• Improved quality of public health services</li> <li>• Residents are beneficiaries of early detection and prevention programs eg access to vaccines<sup>19</sup></li> <li>• Early detection &amp; response to public health alerts in communities [UON]</li> <li>• Improved health literacy within community [UON]</li> <li>• Increased engagement in health service delivery [UON]</li> </ul>	<p><b>Improved public health<sup>5,10</sup></b></p> <ul style="list-style-type: none"> <li>• Reduction in mortality and morbidity rates<sup>10,19</sup> [SDG 3.3.1-53.4s].</li> <li>• Reduce prevalence of AIDS, TB, malaria and neglected tropical diseases and combat hepatitis, waterborne diseases and other communicable diseases<sup>10,19</sup> [SDG3.3 -3.3.1-3.3.5]</li> <li>• Reduce premature mortality from non-communicable diseases<sup>10,19</sup> [SDG3.4]</li> </ul>

\* text in square brackets denotes section and/or page number in preceding document referenced eg <sup>8</sup>[C3] denotes section C3 of document 8 in Endnote list below.

\*\*UON=University of Newcastle FETP Team

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