INTERNATIONAL RESCUE COMMITTEE

FINAL REPORT

SUPPORT TO CONSORIUM OF HUMANITARIAN AGENCIES WORKING ON NON-COMMUNICABLE DISEASES IN HUMANITARIAN SETTINGS

(CONTRACT NO: 720FDA18GR00083)

JULY 9, 2018 – MARCH 9, 2020

PRESENTED TO:

THE USAID OFFICE OF FOREIGN DISASTER ASSISTANCE

Agency Headquarters:
International Rescue Committee

JUNE 7, 2020
I. Executive Summary

PROGRAM TITLE: Support to Consortium of Humanitarian Agencies Working on Non-Communicable Diseases in Humanitarian Settings

PROJECT NO: 720FDA18GR00083

AGENCY: The International Rescue Committee (IRC)

COUNTRY: Global (multi-country)

CAUSE: Conflict affected populations (displaced) (i.e. Natural and conflict-driven disaster)

REPORTING PERIOD: July 9, 2018 – March 9, 2020

GOAL: To support delivery of key priorities aimed at improving care for NCD patients in humanitarian settings.

OBJECTIVES:

Objective 1: To develop an NCD package of materials for use at the primary care level, which consortium members will review and validate, and make available as a resource for health service providers in humanitarian settings.

Objective 2: To assess use of the interagency emergency health kit for NCDs in at least two countries.

Objective 3: To support rollout of the NCD in humanitarian settings operational guidance which will be available for field testing this year in at least 6 countries.

BENEFICIARIES: Total targeted: Not applicable
IDP beneficiaries: Not applicable

LOCATION: Global

DURATION: 20 months
II. Introduction and Key Highlights

A. Contextual Update

Context has changed in all three countries where the WHO NCD kit assessments took place:

- Libya has been experiencing an escalation of the conflict since April 2019 (the civil war in Libya has been ongoing since May 2014), including attacks on the airport and as such the international airport in Tripoli has been closed on several occasions. This has been a challenge for conducting assessments of the NCD kits. The IRC Libya staff who were originally identified and allocated to the data collection were unable to do this task in January 2020 as planned, due to their workload and personal displacement situations. A Tripoli based consultant was subsequently identified and was able to the data collection between 19th February and 8th March 2020, however this was particularly challenging at one of the health facilities, which was closed and inaccessible for several days as staff were striking due to lack of payment. Additionally, road journeys are now taking substantially longer to travel to facilities in Tripoli due to the situation there.

- Travel to Yemen to conduct the NCD kit assessments was impossible to visa restrictions. In addition, Yemen saw an escalation of conflict in Aden and surrounding governorates; several weeks where IRC and other agency offices were closed and some calls that had been planned to discuss the kit assessments had to be cancelled. Furthermore, a training which was planned remotely for the data collectors was challenging due to an internet outage on the scheduled dates (12th – 13th January 2020).

- In South Sudan non-essential travel was not allowed by IRC as of 15th February 2020 and the consultant data collector had to leave the country by that date, limiting the number of days she was able to do the follow-up assessments there.

Some activities planned to disseminate the PEN-H material package and the NCD kit assessment findings have been postponed due to the COVID-19 outbreak. A webinar to roll out the final PEN-H package to IRC Health Coordinators and partners was originally planned for 25th March 2020 but has been postponed as IRC country program staff are too busy with COVID preparedness activities. Furthermore, events where dissemination had been planned, such as the Second Symposium on Diabetes in Humanitarian Settings has been postponed until later in the year, like many other conferences. Therefore these planned dissemination activities will still take place, however they are currently postponed. On a positive note, the IRC collaborated with the Geneva Learning Foundation on a NCDs in humanitarian crisis webinar to roll out the PEN-H on 13th April 20201. A total of 752 people from across the world joined the webinar with an additional 272 joining the weekly re-runs.

B. Implementing Partners (if applicable)

IRC has been collaborating effectively with partners from the Working Group on NCDs in humanitarian settings as follows:

- The Working Group (WG) on NCDs in Humanitarian Settings most convened at UNHCR, Geneva, on 20th February 2020, attended by UNHCR, WHO, MSF, ICRC, IFRC, WFP, Harvard Humanitarian Initiative, Primary Care International, and University of Calgary. IRC’s NCD Officer and Senior Technical Advisor attended the 1-day meeting and presented the PEN-H package, in addition to updates and interim findings from the NCD kit assessments. The Working Group discussed how to share the PEN-H, and agreed to share it on the group’s Dropbox, in addition to organizations such as ICRC and MSF proposing to share the materials on their intranet pages.

- UNHCR provided an update on the publishing of the Operational Guide which has been delayed due to internal review processes. However, in recognition of IRC’s contribution to field testing the guide this will be co-published by UNHCR and IRC in the upcoming months.

- The NCD Kit assessments have taken place in collaboration with WHO in Yemen, Libya and South Sudan between October 2019 and March 2020. Partners at WHO and University of Calgary were involved in reviewing the data collection tools and provided useful feedback on these.

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1 Link to Geneva Learning Foundation webinar https://www.learning.foundation/ncd-humanitarian-settings-view
IRC has continued working with Medical Aid Films (MAF) to monitor and evaluate the animation on diabetes and hypertension, and to develop translated versions of the video, which are now available in French, Somali and Arabic.

IRC and members of the Working Group (Harvard Humanitarian Initiative and IMC) have selected provider Learning Strategy International (LSI) through a competitive procurement process, to develop a set of NCD protocols tailored to humanitarian settings (PEN-H). The materials were developed in period May – July 2019, and field tested between August and October 2019. The PEN-H was then revised based on feedback from the field test, and feedback from a number of humanitarian partners including UNHCR, Save the Children, Harvard Humanitarian Initiative, IMC, and FHI360. A workshop was held in January 2020 to sensitize field staff and partners to the PEN-H contents, and it was attended by staff from IMC, IRC, Kenya Red Cross, WHO, and OFDA, with active participation.

C. Top-line Summary

- **Objective 1 - NCD Materials Package**: A Workshop was held in December 2018 to establish the key material gaps and needs, and build a consensus on what the materials package should contain. The provider, Learning Strategies International, was selected through a competitive tender process and was appointed in March 2019. With Professor Shanthi Mendis as primary author, the materials package titled the Package of Essential intervention for Non-communicable diseases in Humanitarian settings (PEN-H) was drafted between April and July 2019 and was field tested between August and October 2019. The provider revised the PEN-H between November 2019 and January 2020 based on the field test feedback and comments from Working Group members. Illustrations for the package were developed in December 2019, and the PEN-H has been graphic designed. A 2-day workshop was held in Nairobi in January 2020 and was attended by field staff from various locations and organizations. Attendees participated in group scenario exercise to practice utilizing the contents, and provided further feedback, as well as discussing dissemination of the PEN-H, utility and usability, training needs, and monitoring usage. Furthermore, IRC commissioned Medical Aid Films (MAF) to develop a video on Diabetes and Hypertension aimed at community health workers. The video is available in English, French, Arabic and Somali.

- **Objective 2: Assessments of the WHO NCD Kit**: Though discussions with WHO and other working group members, three locations were selected for the NCD kit assessments – Yemen, Libya and South Sudan. A collaboration agreement between WHO EMRO and IRC was agreed, and approvals were sought from IRC’s Institutional Review Board, as well as the WHO and Ministry of Health (MoH) in the three countries. A retrospective assessment took place at three health facilities in Libya and six in south Yemen, which included quantification of kit contents, staff NCD knowledge assessments, and interviews with facility managers. Stakeholder interviews were also conducted with WHO and MoH focal points, and contextual analyses were undertaken too. In South Sudan, a prospective assessment was planned as the kits were being newly distributed there. A baseline assessment took place at four health facilities in October 2019, and a three month follow-up assessment was attempted in February 2020. Unfortunately the follow up assessment was hindered as the kits were found to still be in warehouses as NCD trainings had not been rolled out. IRC is collaborating with University of Calgary (a WHO collaborating center and a member of the NCD Working Group) to do follow-up assessments later in 2020.

- **Objective 3: NCD Operational Guidelines Field Test**: The guidance document was rolled out for field testing in December 2018. Three methodologies were used to compile feedback from participants: (1) Feedback forms (2) Utilization Record to collect usage information over a 6-8 week field test period, and (3) Focus groups (via WebEx). A total of 23 field staff participated, from 3 organizations, across 13 countries. The full report and summary reports are available with detailed findings. The IRC’s NCD

Officer presented the findings at the Working Group meeting on 10th September 2019, and joined the editorial sub-group to implement the required changes. UNHCR is co-publishing the Operational Guide with IRC, and it is currently going through the internal publishing process at UNHCR. Under the current circumstances, IRC and UNHCR are discussing the addition of operational guidelines in the COVID-19 context. It should be published in the coming months and will be disseminated widely to humanitarian partners and field staff, along with the PEN-H.

III. Beneficiary Information

<table>
<thead>
<tr>
<th></th>
<th>Target</th>
<th>Number of Beneficiaries Reached</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of Beneficiaries</td>
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<td>Not applicable</td>
</tr>
<tr>
<td>No. of IDP Beneficiaries</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

IV. Overall Performance

Sector: Humanitarian Coordination and Information Management

Objective 1: To develop an NCD package of materials for use at the primary care level, which consortium members will review and validate, and make available as a resource for health service providers in humanitarian settings.

Objective 3: To support rollout of the NCD in humanitarian settings operational guidance which will be available for field testing this year in at least 6 countries.

<table>
<thead>
<tr>
<th>Humanitarian Coordination and Information Management</th>
<th>Target</th>
<th>Achieved Reporting Period</th>
<th>Cumulative Reached</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of Beneficiaries</td>
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<td>Not applicable</td>
<td>Not applicable</td>
</tr>
<tr>
<td>No. of IDP Beneficiaries (subset of the above)</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

Sub-sector 1: Coordination

Progress on Humanitarian Coordination is going well within this project, as IRC has strong engagement with the NCD Working Group. Two representatives from IRC (Senior Technical Advisor and NCD Officer) attended the Working Group meeting at UNHCR in Geneva in January 2020 to present the NCD consortium project updates and to engage with the partners. Partners appreciated the update and engaged in the discussions, helping to shape the next steps for the project, discussing preliminary findings of the NCD kit assessments, PEN-H dissemination, and publishing of the Operational Guide.

An overview of the achievements on objective 1 and 3 is below:

Objective 1: NCD Materials Package

PEN-H development:
To determine the materials needed, IRC held a 3-day workshop in Nairobi, 10th – 12th December 2018, to bring together participants from a number of organizations and countries. All participants worked together over the three days to hear from countries and organizations about the materials they have developed and/or are currently using; assess the materials already available; identify further materials required (gaps); and establish clear actions to take forward.

The workshop was attended by 27 people, representing 7 organizations (International Rescue Committee (IRC), International Medical Corps (IMC), Kenya Red Cross (KRC), United Nations High Commission for Refugees (UNHCR), Primary Care International (PCI), Medical Aid Films (MAF), World Health Organization (WHO), Médecins Sans Frontières (MSF). The attendees represented 9 different humanitarian-contexts - South Sudan, Sudan, Somalia, Jordan, NW-Syria, NE-Syria, Uganda, Kenya (Dadaab & Kakuma) and Thailand.

Based on the material gaps that were identified and prioritized in the workshop, the package was developed. In March 2019, IRC went out to the market to tender for the package of protocols on NCDs, titled the Package of Essential intervention for Non-communicable diseases in Humanitarian settings (PEN-H). The procurement selection panel included working group members from International Medical Corps and Harvard Humanitarian Initiative. The selected provider, Learning Strategies International was selected with the protocol development being led by principal author of the WHO PEN, Dr. Shanthi Mendis. A first draft of the PEN-H was developed between April and July 2019. Following this, the draft clinical guides, clinical protocols, community-health worker protocols, self-care guides, and facility readiness checklist were field tested during period August to October 2019. The feedback from field test, combined with feedback from Working Group members (Save the Children, UNHCR, FHI360, Harvard Humanitarian Initiative, and University of Calgary) was compiled and the PEN-H was revised in November and December 2019 (The field test report is available as Annex I). Following this, a set of humanitarian context-specific illustrations were developed, and the PEN-H was graphic designed.

A second workshop was held on 22nd – 23rd January 2020. The workshop was attended by 25 people, representing 5 organizations (International Rescue Committee (IRC), International Medical Corps (IMC), Kenya Red Cross (KRC), World Health Organization (WHO), and the United States Office for Disaster Assistance (OFDA). Participants from country programs represented 9 different contexts (South Sudan, Sudan, Somalia, Jordan, Yemen, Kenya, Thailand, Uganda, and northeast Syria). Participants were provided with an overview of the newly developed Package of NCD Protocols and materials (PEN-H), including how they were developed and the intended purpose of each section. This was followed by a series of breakout sessions to familiarize participants with the materials through case scenarios in breakout groups. Discussions were also held on the utility of usability of the materials in humanitarian contexts, and any training needs. The next steps for disseminating the package, monitoring use of the materials and updating them, were also talked through. The workshop report is available in Annex III.

Following on from the workshop, the PEN-H was revised further based on some feedback. However some of the gaps highlighted, such as the lack of clinical protocols for NCDs in pregnancy, and the need for more patient self-care guides for diseases such as diabetes, will need to be addressed through developing of additional content in collaboration with other partners To address the need for the PEN-H to be available in different languages, it has since been translated into both French and Arabic. Furthermore, the format has been amended so staff can access each protocol/guide as separate PDFs in zip folders, and the illustrations are available as separate documents too so they can be printed and used as posters/leaflets. The PEN-H is available to download here. A 48 minute webcast has been developed by Learning Strategies International, to give an overview of the contents included in the PEN-H and to provide information and advice on how to use the package.

**Animation film on Diabetes and Hypertension:**
As part of the materials package, IRC has also commissioned Medical Aid Films (MAF) to develop a video on Diabetes and Hypertension aimed at community health workers. To do this, a script was developed, which was reviewed by a panel including a Working Group member from IMC, and health managers/coordinators from different humanitarian contexts. The video has been completed in English and has also been translated into French, Somali and Arabic. It has been shown to field staff in Libya and Uganda and links provided to the NCD working group partners and IRC field staff.
As part of a wider project on NCD training needs among CHWs, a Masters student conducted some focus groups after showing the animation to VHTs (volunteer health teams) in Uganda. The video received positive feedback: “the video was so important”, however it was also highlighted that training remains a gap, “I urge you – go back, if possible, come back with more trainings what we don’t know – it must be in our fingertips! When you go to the field you must not be stuck, when a member of the community asks a question you are not able to answer, that one you will not look responsible”.

Dissemination Activities:
IRC had an abstract accepted to present the CHW protocols, self-care guides, and CHW video at the CORE group conference in Nairobi on 15th October 2019, as part of a 90 minute session for New Information Circuit Tables. This enabled the draft PEN-H contents and the video to be showcased and presented to staff from a number of NGOs and related organizations. The PEN-H and animation film have also been shared with members of the NCD Working Group, and were shared with attendees at the workshop in January 2020. Furthermore, these materials were showcased at a market-place session and an NCD deep-dive, at IRC’s Health Conference in Addis Ababa in September 2019 – an event attended by health coordinators and health managers from IRC’s health programs globally, representing over 40 countries.

Members of the NCD Working Group discussed ways to disseminate the materials during the meeting in February 2020. Some organizations such as ICRC and MSF have internal intranet pages where they can share the materials for staff in country programs.

Further dissemination activities have been planned, however, some of these have been postponed due to the COVID-19 situation. These include an introduction webinar which had been scheduled on 25th March 2020 but has been postponed as IRC country program staff are too busy with COVID preparedness activities. Also, the Second Symposium on Diabetes in Humanitarian Settings which was scheduled in June 2020 has also been postponed. An online event on NCDs in Humanitarian Settings was organized by Geneva Learning Foundation on 13th April 2020 was attended by 752 participants and gave opportunity for IRC and LSI to present the PEN-H. Geneva Learning Foundation is continuing to re-run the event on their website.

Objective 3: NCD Operational Guidelines Field Test

Background: The Operational Guide for NCDs in Humanitarian Settings is a document developed by the NCD Working Group. It was funded by UNHCR and the first draft was written by University of Geneva, with substantial input from working group members. Field testing led by the IRC took place between December 2018 and May 2019.

Methodology and participation
- **Feedback Forms:** Feedback forms were disseminated, along with the operational guidelines, in December 2018. The form asked participants to review each chapter of the document and provide their feedback, over a 4 week period. A total of 17 responses were received from 3 different organizations, covering 9 different countries (Somalia, Libya, Sudan, South Sudan, Syria, Yemen, Kenya, Jordan, Thailand and Uganda).
- **Utilization Record:** The participants were asked to utilize the operational guidelines over a 6 – 8 week period and complete a utilization record when they refer to the document. To expand the field test, the operational guidance and utilization record were translated into French to expand the field test to francophone countries. The utilization record was completed by a total of 10 participants from 7 countries (Somalia, Libya, Kenya, Thailand, Uganda, Mali and DRC).
- **Focus Groups:** At the end of the 8-week field test period, a series of 5 focus group discussions were conducted with the participants (via WebEx), between 26th March and 26th April, including one discussion with francophone countries. There were a total of 16 participants from 9 different countries.

Table 1: Field test participation by country and methodology
Findings: During the 8 week field test, the operational guidelines was referred to 59 times by the participants who completed the record. This was followed by a series of 5 focus groups, joined by 16 participants from 5 countries. The full report and summary reports are available with detailed findings. The feedback themes were: lack of clinical guidance; visual attractiveness and design; lack of suitability to protracted humanitarian settings; a need for case studies and practical examples; and expansion of some sections.

Table 2: Recommended actions to improve the operational guidance

<table>
<thead>
<tr>
<th>Feedback themes</th>
<th>Recommended actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Field staff confused about the lack of clinical guidance</td>
<td>Consider amending the “purpose and scope” section to include links to clinical guidance (such as the WHO PEN and PCI field guides). Consider adding a footnote to the cover page of the final version to note that it does not contain clinical guidance.</td>
</tr>
<tr>
<td>2. Visual attractiveness and design – too much block text and more graphics required</td>
<td>Consider adding more graphs, images, boxes and tables to all sections, to break up the text in the document and make it more visually appealing. Graphic design the final version and include a clickable contents page for easier to access. Consider creating a mobile application version.</td>
</tr>
<tr>
<td>3. Lack of suitability to protracted humanitarian settings</td>
<td>Consider adding more detail, information or examples from protracted settings, particularly around best use of resources, NCD screening and NCD prevention. Include some case study examples (e.g. from long-term refugee / IDP camp settings). Alternatively, create two versions of the guidance, one tailored to acute emergencies and one aimed towards protracted settings.</td>
</tr>
<tr>
<td>4. Case studies / scenarios</td>
<td>Consider include some case studies and example scenarios from acute and protracted emergencies. For example, an example referral pathway, community health worker initiative, monitoring &amp; evaluation approach, and exit strategy.</td>
</tr>
</tbody>
</table>
5. **More information / expansion of some sections**

   Consider expanding or adding more information, examples or links to the following areas:
   - List of essential laboratory tests and what to do (operationally) when these tests are not available
   - Referral pathways – more information / example
   - Patient education and lifestyle advice – more information / example
   - Training – e.g. the importance of having standardized training modules
   - Role of community health workers (such as example job description)
   - Mental health as a comorbidity (within prioritization of care)
   - Research - call for NCD projects to plan for research within the design
   - Advocacy materials – links/references
   - Information about costs analysis – to calculate the best use of resources

6. **References and hyperlinks are not all working**

   Update the references and link, and develop a plan/timeline for reviews and updates of the guidance. Add a link to the WHO published guidance on palliative care in humanitarian settings.

**Steps Taken:** The IRC’s NCD Officer presented the findings at the Working Group meeting on 10th September 2019, and joined the editorial sub-group to implement the required changes. IRC provided input into the revisions of the guidance between October 2019 and January 2020, based on feedback from the field test. UNHCR has chosen to co-publish the Operational Guide with IRC due to the contribution IRC has made. The document is undergoing the publication process at UNHCR; they are planning to publish later this year pending addition of COVID-19 NCD organization of care guidance. The IRC plans to disseminate the Operational Guide with the PEN-H when it is finalized, however some dissemination activities have been postponed due to the COVID outbreak, as described above.

The full field test report is available in [Annex II](#).

**Sector: Humanitarian Studies, Analysis, or Applications**

**Objective 2:** To assess use of the interagency emergency health kit for NCDs in at least two countries.

<table>
<thead>
<tr>
<th>Humanitarian Coordination and Information Management</th>
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<tr>
<td>No. of IDP Beneficiaries (subset of the above)</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

**Sub-sector 1: Applied studies, Analysis or Applications**

The WHO NCD kit is made of 5 modules that can be ordered separately – (1) medicines for NCDs & mental health, (2) cold chain medicines such as insulin, (3) consumables such as band aids, (4) equipment and (5) equipment renewables such as glucose strips. To date, thousands of kits have been deployed to countries experiencing humanitarian crises, including in Yemen, Libya, Iraq, Syria, Afghanistan, Democratic Republic of Congo, and South Sudan.

A collaboration agreement has been established between IRC and WHO EMRO for this project, to ensure a partnership approach to the WHO NCD kit assessments and the dissemination of the findings. The Senior Technical
Advisor for Primary Healthcare, NCD Officer, Pharmacy Advisor, and Health Research & Evaluation Coordinator at IRC led this project in collaboration with WHO EMRO’s Regional Advisor on NCDs. The IRC country program staff and/or local consultants conducted the data collection.

Three countries were selected to help ensure the objective (two settings) would still be fulfilled even if the security situation limited the data collection in one of the contexts. Furthermore, the three countries that have been selected are contextually different, and at various stages of kit use; thus undertaking the assessments in all three countries added value to the findings. The level of primary healthcare service delivery is also different between the three contexts, thus enabling the assessments to compare the kit usage in different health systems.

**Methods**
The following is the approach taken for the NCD Kit Assessment; slight variations in each country due to contextual differences are noted.

**Contextual Analysis**
The contextual analysis was primarily conducted through a desk review of available information on each setting, including UNHCR and UNOCHA situation reports, WHO Health Cluster reports, and other relevant literature, in addition to correspondence with local staff (IRC health program and NCD working group partners’ staff). The contextual analyses included the following:

- Brief historical account of the country’s humanitarian crisis and current situation
- Description of the health system capacity for diagnosing and treating NCDs, including numbers, types, and locations of facilities, numbers and locations of HCWs and CHWs, and availability of NCD medications and equipment.
- Review of NCD-related research in each setting, if available, including estimated burden of priority NCDs

**Health facility assessment**
The enumerators visited each of the health facilities and recorded information about the infrastructure, health services offered, the availability of guidelines, human resources, and medication and supply storage. The data was collected through physical observations and interviews with relevant staff and recorded on tablets, using the ODK Collect platform.

**Quantification of NCD medications and supplies**
The quantities available of NCD Kit contents (medications and supplies) were recorded at each of the facilities assessed. In South Sudan, the facilities had not received the kit, but during the baseline assessment, quantities for a number of basic NCD medications and supplies, including generic classifications of drugs, were recorded rather than the specific kit contents.

During analysis, the quantity of the kit contents remaining was compared with the quantity provided in each kit to roughly calculate consumption, though this does not account for any stock (sourced elsewhere) that was available on the day of kit delivery.

**Health facility staff survey**
The staff present at each facility on the day of the assessment filled in a self-administered survey that asked questions about their professional background, including relevant NCD trainings, and their perceptions around NCD management and challenges therein. The questionnaire continued with a series of NCD knowledge questions related to the priority diseases and appropriate medications and treatments. Prescribing staff, including physicians, continued with a series of additional knowledge questions specific to the kit contents and NCD clinical protocols.

The questionnaires were administered on paper, in English or Arabic, and entered into an Excel database by Arabic-speaking IRC staff.

**Interviews with key informants**
Individual interviews were undertaken with stakeholders, including health facility managers, as well as NCD focal points and key contacts from NGOs, WHO, and/or MoH. These were conducted in-person where possible, by either
local IRC staff or a consultant. When in-person interviews were not possible, they were conducted remotely. The questions included in the interviews were around the ordering and deployment of the kit, their feedback on this process, the burden of NCD management in their contexts, and their recommendations for improving care.

<table>
<thead>
<tr>
<th>Country</th>
<th>Pre-deployment assessment</th>
<th>Follow-up (post-deployment) assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>South Sudan</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>Yemen</td>
<td>0</td>
<td>7</td>
</tr>
<tr>
<td>Libya</td>
<td>0</td>
<td>3</td>
</tr>
</tbody>
</table>

Unfortunately, the data from the additional interviews conducted in Libya were lost. The full transcript is only available for one interview (with WHO) and notes are available for two additional interviews (with facility managers).

**Findings**

The retrospective assessments took place at 7 health facilities in southern Yemen (3 in Abyan, 4 in Shabwah), though only 5 had received the NCD Kit. All data included in this report is from the facilities who received the Kit only, unless otherwise specified. In Libya, the assessment was conducted in 3 facilities (Tripoli and surrounding area). In South Sudan, a baseline assessment took place at 4 health facilities (2 in Juba, 1 in Bentiu, and 1 in Malakal) where the kit distribution has been planned.

**NCD Capacity – diagnosis & treatment**

Overall, the capacity at the facilities in all three countries is very low for diagnosing and treating NCDs and mental health conditions. This is consistent with the medical capacity in humanitarian contexts, which are typically under-resourced and focused primarily on communicable diseases and maternal and child health.

**Facilities offering comprehensive (diagnostic + treatment) services, by condition**

<table>
<thead>
<tr>
<th>Country</th>
<th>Diabetes</th>
<th>Hypertension</th>
<th>CVD</th>
<th>Epilepsy</th>
<th>Asthma/COPD</th>
<th>Anxiety</th>
<th>Depression</th>
<th>Psychosis</th>
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</thead>
<tbody>
<tr>
<td>Libya (N=3)</td>
<td>3 (100)</td>
<td>3 (100)</td>
<td>1 (33)</td>
<td>0</td>
<td>1 (33)</td>
<td>0</td>
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<td>South Sudan (N=4)</td>
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<td>1 (25)</td>
<td>0</td>
<td>1 (25)</td>
<td>1 (25)</td>
<td>1 (25)</td>
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<td>1 (20)</td>
<td>3 (60)</td>
<td>1 (20)</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

**NCD Capacity – medicines & supplies**

The primary barrier to delivery of NCD services in health facilities, according to HCWs and other key informants, is lack of medications and supplies. The data from the quantification tool confirmed this, showing severe shortages of the medications and supplies included in the NCD kit (or, in the case of South Sudan, basic NCD medications and supplies). The facilities do not seem to have a reliable supply chain for these items and indicate that the NCD kit should provide more than three months of supplies. This is outside of the scope of emergency kits, but indicative of the acute need for necessary medications and supplies in these contexts.

**Availability of listed NCD medications and supplies, day of assessment**

<table>
<thead>
<tr>
<th>Country, facility</th>
<th>% medications available</th>
<th>% supplies available</th>
</tr>
</thead>
<tbody>
<tr>
<td>Libya Arada Polyclinic</td>
<td>76.5</td>
<td>42.2</td>
</tr>
<tr>
<td>Libya Arada Polyclinic</td>
<td>100</td>
<td>93.3</td>
</tr>
</tbody>
</table>
Very few facilities even have half of the basic NCD medications and supplies, even after receiving the NCD kit approximately three months prior to this assessment (in the case of Libya and Yemen). This suggests that they quickly depleted the kit contents and do not have incoming supply to replenish stores. Notably, the medication and supply availability was comparable in the two facilities which had not received the kit.

**NCD Capacity - staff & training**

Another significant barrier, in addition to medications and supplies, is also the lack of knowledge and training around NCDs. Despite the increasing burden of NCDs in these contexts, HCWs seem ill-equipped to provide the necessary care, even with access to medications and supplies. In interviews with facility managers, they explained that they may not use all of the contents of the NCD kit because there are some with which they are wholly unfamiliar and uncomfortable prescribing.

Most staff have not received specific training on NCDs, and of those who have, many report that the training occurred more than 5 years ago.

<table>
<thead>
<tr>
<th>Country</th>
<th>% staff who have received NCD training</th>
</tr>
</thead>
<tbody>
<tr>
<td>Libya</td>
<td>9.0</td>
</tr>
<tr>
<td>South Sudan</td>
<td>37.5</td>
</tr>
<tr>
<td>Yemen</td>
<td>21.1</td>
</tr>
</tbody>
</table>

Although only 1 in 5 healthcare staff surveyed claimed to have received NCD training, a key informant interview with WHO revealed that two trainings had been delivered on NCDs in Yemen, based on the WHO PEN. These included 200 physicians, with one workshop taking place in December 2018 in north Yemen and another in March 2019 in the South.

These training gaps are apparent in the knowledge test scores. Generally, staff seem to have a better understanding of hypertension than other NCD conditions, such as diabetes. Their knowledge around mental health is generally low, and a key informant in South Sudan indicated that HCWs use stigmatizing language about patients with mental health conditions.
<table>
<thead>
<tr>
<th>Country, facility</th>
<th>All staff knowledge questions</th>
<th>NCD Kit contents questions</th>
<th>Clinical questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Libya</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arada Polyclinic</td>
<td>91%</td>
<td>No relevant respondent</td>
<td>No relevant respondent</td>
</tr>
<tr>
<td>Ce-Massoud Health Center</td>
<td>90%</td>
<td>No relevant respondent</td>
<td>No relevant respondent</td>
</tr>
<tr>
<td>Elmagaryef Health Center</td>
<td>78%</td>
<td>53%</td>
<td>20%</td>
</tr>
<tr>
<td>South Sudan</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bentiu Hospital</td>
<td>92%</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>Kotor PHCC</td>
<td>86%</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>Malakal PHCC</td>
<td>81%</td>
<td>38%</td>
<td>27%</td>
</tr>
<tr>
<td>Munuki PHCC</td>
<td>64%</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>Yemen (facilities receiving kit)</td>
<td>75%</td>
<td>61%</td>
<td>59%</td>
</tr>
<tr>
<td>Alsa’eed Hospital</td>
<td>81%</td>
<td>60%</td>
<td>63%</td>
</tr>
<tr>
<td>Ataq Hospital</td>
<td>83%</td>
<td>62%</td>
<td>63%</td>
</tr>
<tr>
<td>Azan Hospital</td>
<td>83%</td>
<td>63%</td>
<td>62%</td>
</tr>
<tr>
<td>Hab’an Hospital</td>
<td>69%</td>
<td>53%</td>
<td>48%</td>
</tr>
<tr>
<td>Mahnaf Hospital</td>
<td>58%</td>
<td>68%</td>
<td>60%</td>
</tr>
<tr>
<td>Yemen (facilities without kit)</td>
<td>77%</td>
<td>65%</td>
<td>59%</td>
</tr>
<tr>
<td>Alrazi Hospital</td>
<td>75%</td>
<td>61%</td>
<td>52%</td>
</tr>
<tr>
<td>Alwadhe’e’a Hospital</td>
<td>68%</td>
<td>69%</td>
<td>66%</td>
</tr>
</tbody>
</table>

Though South Sudan’s all staff knowledge scores are comparable to those of Libya and Yemen, they have very low scores for the kit contents and clinical questions administered to prescribing providers. However, on the day of the assessment only one facility had any of these providers available, and then only two, so the sample size is quite small. This does perhaps indicate the limited capacity of service provision at these facilities. However, an NCD training has been planned to be conducted in South Sudan in 2020, before the NCD kits are distributed to the health facilities.

Considering the gaps in knowledge, the NCD Kit should be distributed with accompanying in-person training when possible, to ensure that the medications and supplies are not wasted and that patient safety is not compromised.

For more specific country-level findings and recommendations, please refer to the following annexes:

- Annex IV: Yemen NCD Kit Assessment
- Annex V: Yemen Dashboard (All)
- Annex VI: Yemen Dashboard (Kit Only)
- Annex VII: Libya NCD Kit Assessment
- Annex VIII: Libya Dashboard
- Annex IX: South Sudan NCD Kit Assessment
- Annex X: South Sudan Dashboard

**NCD Capacity – clinical guidelines**

Although national clinical guidelines for NCDs have been developed in Yemen, Libya and South Sudan, the use of these at the facility level is variable.
In the Key Informant Interviews, staff were asked about the availability of clinical guidelines in their facilities, with mixed feedback. In Yemen, facility managers responded either that NCD clinical guidelines were not available (n = 5) or that they did not know (n = 2). However, a key stakeholder at WHO explained that in Yemen NCD tools had been developed by WHO, including Syrian NCD guidelines developed by Primary Care International, and that these were adapted for Yemen, and were simple to use, and had been distributed in both Arabic and English. Therefore, it seems that although clinical guidelines have been developed in Yemen, these have yet to be widely distributed at the health facility level.

In Libya, a key stakeholder from WHO explained that the guidelines are provided first to health facilities along with training, and then NCD kit distribution is followed 1 month later. It’s the first time there have been national guidelines at the primary healthcare level in Libya.

In South Sudan a set of NCD guidelines had been newly developed. The WHO in South Sudan developed a guidelines document that includes the four main NCDs and four main mental health disorders. IRC has supported by printing copies of the field test version of the NCD guidelines that will be used to implement the kit, but as these have not actually been rolled out yet, it is not possible to understand how useful they are or how well utilized they will be.

**NCD Kit logistics**

The logistics of distributing the NCD kits has proved to be a significant challenge in all three settings where the assessments were carried out. The challenges relate to various different elements of the supply chain, including delays at customs, delays in distribution from a central warehouse to the health facilities, and lack of communication about the kits to the facility managers. The delays have resulted in kits arriving with some medicines already expired.

**Yemen**

In Yemen, several issues have been described regarding the logistics of the kits. Seven facilities had been selected for the assessments to take place. However, when the data collectors arrived to do the assessments, it was found that the facilities chosen (based on a WHO list of where the kits were deployed in 2019), had not all received the kits. The list indicated that 50 kits were distributed in south Yemen, across 38 facilities in the South (10 facilities in Abyan, 2 in Al Jawf, 1 in Al Maharah, 10 in Hadramout, 6 in Shabowa and 9 in Taiz). In the same year, a further 124 kits were distributed to 94 facilities in the north.

Based on this information, 4 facilities were selected in Abyan and 3 in Shabowa for the assessments. Unfortunately, three of the selected facilities in Abyan where the assessments had been planned, informed the data collectors that they had not received the NCD kit (Alrazi Hospital, Alwadhee'a Hospital, Modiah Hospital). Two additional locations were selected in Abyan; Zunjobar Hospital where an assessment took place, and Salah Naser Hospital which was inaccessible due to a security issue. In Shabowa, an additional facility was also selected, enabling 6 assessments to take place in locations that had received the kit. The data collectors had also checked with two additional facilities in Abyan (Alrazi Hospital and Ahwar Hospital) that were also on the list but claimed to have not received the kit.

This indicates an issue either with the logistics process, perhaps the kits were delayed and therefore when the data was collected in Jan-Feb 2020 the kits might not yet have arrived at those facilities. Alternatively, it could be a problem with the monitoring system, and a poor record being kept of where the kits were being deployed to. Notably, communication about the planned distribution of the kits seems to be poor. When interviewed, the facility managers did not appear to have ordered the kits or known about the arrival of the kits in advance; one stated that they only knew the kit was arriving when the driver of the vehicle called to let them know just before reaching the facility. Other issues highlighted at the facility level included a lack of refrigeration to store cold chain medicines such as insulin, and arrival of kits in poor condition due to heavy rain.

Another issue highlighted regarding logistics are that the kits can be substantially delayed before arriving. In Yemen, kits take between 8 and 12 months to be released from customs which slows the delivery process substantially and
some had expired before reaching the health facilities. For example, a key informant explained that almost all Levothyroxine in the kits had expired before reaching Yemen, and that other medicines were close to expiration date. Sometimes 2 – 3 medicines would arrive and would be expired or almost expired. The expired medicines were removed from the kits before the kits were utilized as it would take another 2 – 3 months for the kits to arrive at the health facilities. However this highlighted a wider issue with the medicines in the kit too as they do not seem to have the same shelf-life as medicines that are being ordered individually.

The effective monitoring of the supply chain process is hindered in Yemen by the lack of a monitoring system. Neither WHO nor MoH have a system in place to track the distribution and delivery of the NCD kits. However, while it is not a routine monitoring system, third party monitoring is being conducted by WHO through follow up calls to facilities and by doing random visits to hospitals.

South Sudan
There were also logistical challenges with the distribution of NCD kits in South Sudan although these appear to be more due to planning and communication challenges between WHO and MoH. The NCD kits had been planned to be newly distributed to 4 health facilities in South Sudan in November 2019. Therefore a baseline assessment was conducted in October 2019, with a planned follow-up (endline) assessment scheduled to take place in February 2020 after 3 months’ of kit use.

Unfortunately, when the endline assessment took place it became clear that the kits had not yet arrived at the health facilities and were still being held inside warehouses. The reason for this was that staff had not yet been trained on NCDs. MoH were insisting on an in-person training, which WHO did not have enough budget for. Since this issue was raised, it appears it is in the process of being resolved. Unfortunately, however, some of the hypertension medicines were expiring in March 2020, and some other medicines in September 2020, with the majority expiring in 2021. Like in Yemen, this also highlights the issue that communication between WHO and MoH and communication with the health facilities is vitally important for the logistics and supply chain process to be effective.
Libya

In Libya there have also been some challenges with the logistics and supply chain process. More than 50 kits have been deployed so far, to health facilities in and around Tripoli. There are many procedures in Libya which act as obstacles to distribution, and similar to the situation in Yemen, this can cause delays to distribution. According to WHO, sometimes the kits are kept in storage for up to 6 months. However they claim that none of the medicines were out of date because these challenges are planned for in the supply chain process, and therefore they make sure the kits can last for 12 – 18 months.

Another challenge in Libya is that there is not a surveillance system in place to monitor use of the NCD kits. However, WHO explained that it is possible to review medicines usage by requesting this information from the pharmacists who can monitor which medicines have been used and how many.

NCD Kit contents

Yemen

In Yemen, while the NCD kits were appreciated as an interim solution, from 2020 the WHO has decided to move towards individual ordering of NCD medicines and supplies because there were several contents in the kit that were not well suited to the Yemen contexts, such as:

- Neuro-psychiatric drugs are not used in hospitals in Yemen, only in psychiatric hospitals. So those drugs were removed and given only to psychiatric hospitals. The reason provided for this was that Doctors in the healthcare facilities are not familiar with drugs like fluoxetine, Carbamazepine and Sodium Valproate; therefore these were extracted from the kits.
- Levothyroxine was almost all expired on arrival so was not used.
- Salbutamol and beclomethasone were received huge quantities but it was perceived that these are underutilized in Yemen, as there are not many diagnoses. It was also explained that the Inter-Agency Emergency Health Kit (IEHK) also contains these medicines. As there was a build-up of these unused Asthma medicines, the MoH and WHO requested to have these removed from future orders and have then used in other countries instead of continuing to transport them to Yemen.
- The kit module 1b for insulin was only ordered in small quantities as WHO had ordered huge quantities for MoH, providing 75% of the national need of insulin which is approximately 1,000,000 vials per year. Therefore the insulin received through the NCD kits made up a relatively small quantity of the total among being procured.
- WHO was informed that Glucagon not be in used in the hospitals; if patients have suspected hypoglycemia they are treated in the Governorate Hospitals. This occurred in both north and south Yemen.
- The dosages of some items were less than the dosages of the tablets commonly utilized in Yemen. For example, carbamazepine in the kit was in 100mg tablets, but in Yemen they are usually provided as 200, 300, or 400mg tablets. The same comment was noted for Enalapril which is provided as 5mg tablets in the NCD kit, whereas staff and patients in Yemen are used to 10mg (or above) tablets, which is the usual dosage in Yemen.
- Another finding described by WHO was that the medicines in the kit were from Indian manufacturers, whereas the healthcare providers and patients in Yemen tend to prefer generic medicines from European or Middle Eastern companies. During the training workshops and follow-up session the staff were informed that these medicines are the same quality but they have a perception about where the drugs are from.

The interviews with facility managers at the facilities in Yemen also yielded comments about the suitability of some of the NCD kit contents, including:

- “[it would be better] to have a better quality [medicines] (not Chinese), to include Insulin, Levothyroxine and Bisoprolol, and to add more equipment”
- “[I recommend to] increase the quantity of kits and provide medications for rare diseases.”
• “[I recommend] increasing the quantities of the kits. Provide diverse forms of medications (Syrup, injections, tablets etc.) and provide equipment like C.T scans, defibrillator, ICU equipment.”

These comments from the facility managers do not align with the comments from WHO Yemen, but appear to support the comment that the location where the generic medicines are manufactured is an issue in Yemen. Health facility staff are also requesting more equipment that would be aimed more at the secondary and tertiary level care; a discrepancy which may have occurred because the NCD kits are being use at hospital level rather than in primary healthcare facilities in Yemen.

**Libya**

Similarly to the findings in Yemen, not all of the kit contents were considered suitable in the Libya context. For example some of the contents of the NCD kits – the psychotropic medicines - had been removed before they were distributed to the facilities, as it was perceived that some facilities are not well-placed to receive these medicines.

WHO also explained that Libyan medical training varies a lot and many healthcare staff and patients prefer brand names rather than generic medicines. However, the stakeholder explained:

“Libya has moved away from guidelines influenced by drug companies, and the new NCD guidelines helped to shed light on true good practice which is also cost-effective. The kit has helped patients and has shown clinicians that best practice is not based on brand names or expense”

**Perceived impact on quality of care**

**Yemen**

The key stakeholders in Yemen perceived that the NCD kit had a positive impact on patients’ quality of care. In particular, four of the five facility managers who received the kit have mentioned that the kit contents being free was a particular advantage, as it removed cost as a barrier to medicines access, and had made it easier for patients to access the medicines.

“Since we have received the kits, our pharmacy is working 24 hours and free.”

“Patients are more satisfied when they receive medications for free.”

“These kits affect the quality of care and give the opportunity to patients receiving medications for free”

It was also found that the kit availability prevented the need for patients to get medicines from other locations outside the hospital. Some perceived that this had a positive impact on patient satisfaction.

”[The kit has] helped us provide good medical care and decreased the need of patients getting drugs from outside the hospital”

“It became easier for patients as free pharmacy has opened in the hospital. Free medications made patients more satisfied.

Facility managers perceived that the provision of the NCD kit had increased patients’ attendance for their appointments. Four of the five managers who had received the kits at their facilities stated that attendance had increased, and one said it had stayed the same. Most of them noticed an improvement in quality of care, however some felt this was hindered by the changed in medicines.

“Patients are satisfied about our medical care which is good in conditions like this but not good to receive new different drugs for them”

“There’s a partial satisfaction across patients. This is due most of items are not available and of poor quality.”

”[Patients are] more satisfied... The level of available medicines became better than before.”

“There is an improvement and satisfaction from the service”
There were also mixed perceptions about the ease of use of the kits from the hospital clinicians. Some felt that it was easy to use and provided positive feedback, while some facility managers perceived that clinical staff did not know how to use some items. This further supports the findings on the training needs and gaps identified by the staff knowledge survey.

Libya

Though KII information from Libya is limited due to lost data, the impression from the available interviews is that the kit improved quality of care for NCD patients, if only temporarily. In particular, interviewees said that there has been an improvement of services for migrant and refugee populations, who are not able to access the private clinics nor pay for medications.

The WHO informant also explained that the set of national NCD guidelines that were distributed one month prior to the NCD Kit distribution, the first of its kind in Libya, has contributed to improved quality of care. These guidelines have “helped to shed light on true good practice which is also cost effective – along with the kit [it] has shown clinicians that best practice is not based on brand names or expense.”

Future plans for NCD kit use

In Yemen, the NCD kits have been in use in 2017, 2018 and 2019. However, as of 2020 the MoH in Yemen is moving away from kit use. In fact, from a key informant interview it seemed that MoH did not want to continue the use of the kits in 2019 but they were already planned to be procured from a funding proposal and so their use continued for one more year. However, the kits were only developed for interim use, for up to 6 months in an acute crisis. In Yemen, WHO and MoH did not know the NCD caseload initially and used the catchment area of the district hospitals to calculate the kits for distribution. Now, the kit contents utilization has been used to calculate the quantities of individual NCD medicines needed so these can be ordered separately from 2020 and no longer use the NCD kits. Feedback from a key informant was that the NCD kit use in Yemen was positive and they would recommend it for use in other humanitarian emergencies, and then move to ordering individual items later on.

In South Sudan, the NCD kits had not yet started being used (as of March 2020) but their use was planned to be rolled out in four health facilities. It is not clear what the future use of the NCD kits might be like in South Sudan beyond this.

Recommendations

I. **Review kit contents:** It is recommended that WHO reviews the contents of the WHO NCD kit based on the detailed consumption data and viewpoints of the facility managers, and consider increasing/reducing quantities as needed

II. **Reframe the kit modules:** It is also suggested that the NCD kit modules could be amended separating out the medicines and supplies into further sub-categories, such as cardiovascular disease, chronic respiratory diseases, and diabetes. It’s also recommended to create a separate module for psychotropic medicines as these have been separated from the NCD kits and used only at specialist facilities, in Yemen and Libya.

III. **Monitoring & evaluation tools:** It is clear that there has been poor monitoring of the NCD kit use. Therefore provision of M&E tools, such as logs and use of barcodes on the medicines (with barcode scanner apps downloaded by the pharmacy managers) could support effective M&E of kit utilization.

IV. **Support transition to supply chain:** Transitioning from the kit use to regular supply chain could be a challenge in some settings, therefore a system to support this process, and limiting the time frame of kit use, could be beneficial.

V. **Training needs:** Some evident NCD training gaps have been highlighted in this assessment, therefore trainings should be rolled out with the NCD kits, including regular refreshers, to ensure healthcare staff are confident and capable of using the NCD kit contents.
VI. Accountability: The assessment highlighted that there can be logistical issues that go unresolved for long periods; therefore, lines of accountability should be set up with a clear statement of what WHO and MoH are responsible for and which staff in those organizations are responsible.

V. Indicator Tracking

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Indicator Type</th>
<th>Cumulative Targeted</th>
<th>Reporting Period Reached</th>
<th>Cumulative Reached</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sector: Humanitarian Coordination and Information Management</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Objective 1: To develop an NCD package of materials for use at the primary care level, which consortium members will review and validate, and make available as a resource for health service providers in humanitarian settings.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Objective 3: To support rollout of the NCD in humanitarian settings operational guidance which will be available for field testing this year in at least 6 countries.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sub-Sector: Coordination</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of humanitarian organizations actively coordinating in the proposed area of work</td>
<td>Indicator 1</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>IRC, ICRC, IMC, Save, UNHCR, WHO, PCI, Harvard Humanitarian Initiative</td>
</tr>
<tr>
<td>Number of humanitarian organizations actively participating in the Inter-Agency coordination mechanisms</td>
<td>Indicator 2</td>
<td>8</td>
<td>10</td>
<td>10</td>
<td>IRC, ICRC, IMC, MSF, Save, UNHCR, WHO, PCI, WFP, Harvard Humanitarian Initiative</td>
</tr>
<tr>
<td>Number and percentage of humanitarian agencies participating in joint assessments</td>
<td>Indicator 3</td>
<td>8 (100%)</td>
<td>10</td>
<td>10</td>
<td>The operational guidance field test has been participated in by IRC, IMC and ICRC. The materials package feedback has been received from IRC, IMC, MSF, Save, ICRC, FHI 360, PCI, UNHCR, Harvard Humanitarian Initiative, and University of Calgary. All three objectives updates and next steps have been actively discussed at the working group meeting in Feb 2020 with input from WHO, PCI, Harvard Humanitarian Initiative, UNHCR,</td>
</tr>
<tr>
<td></td>
<td>Indicator 4: Custom</td>
<td>6</td>
<td>7 (4 additional)</td>
<td>7 (4 additional)</td>
<td>WFP, IMC, ICRC, Save, ICRC, MSF and University of Calgary.</td>
</tr>
<tr>
<td>----------------------------------------------------------------</td>
<td>---------------------</td>
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<td>------------------</td>
<td>------------------</td>
<td>----------------------------------------------------------</td>
</tr>
<tr>
<td>Number of countries where draft NCD package of materials is piloted</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>The package of NCD protocols has been field tested, with feedback received from Syria, and Somalia (as well as additional countries (Thailand, Jordan and Kenya). The workshop in January 2020 to sensitize country programs to the PEN-H was attended by staff from programs in South Sudan, Sudan, Somalia, Yemen, and North East Syria (as well as additional refugee contexts in Kenya, Thailand and Uganda). The MAF animation film has been piloted in Libya (and Uganda).</td>
</tr>
<tr>
<td>Number of countries where the NCD operational guidance is piloted</td>
<td>Indicator 5: Custom</td>
<td>6</td>
<td>9 (plus 4 additional)</td>
<td>9 (plus 4 additional)</td>
<td>Libya, Yemen, Somalia, Sudan, Syria, South Sudan, DRC, CAR, Mali, Kenya, Thailand, Uganda, Jordan. (note that these contexts include refugee hosting countries in addition to conflict-affected locations)</td>
</tr>
<tr>
<td>Package of NCD resource materials for primary healthcare completed and endorsed by working group</td>
<td>Indicator 6: Custom</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>The draft package was presented to the working group through a webinar presentation in July, to obtain their feedback. The final PEN-H was presented to working group members at the Working Group meeting on 20th February 2020. It received good feedback, and the</td>
</tr>
<tr>
<td>Number of special studies, program evaluations, applied research activities (development or basic research), sector assessments, or feasibility studies completed and disseminated among relevant stakeholders</td>
<td>Indicator 1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>---</td>
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<tr>
<td>The kit assessments have been completed in Yemen and Libya, with a partial assessment undertaken in South Sudan. The interim findings and key challenges were presented to Working Group members in February 2020. The IRC-WHO joint publication of the findings from the Kit assessment will be finalized in summer 2020. Several additional dissemination activities for the findings have been planned including a current submission to a special edition in BMJ Global Health.</td>
<td></td>
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</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Number of studies, program evaluation, applied research activities, sector assessments, or feasibility studies used to inform, guide or improve programming</th>
<th>Indicator 2</th>
<th>1</th>
<th>1</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>This will be the kit assessment, which will inform the revision of the WHO NCD Kit. The meeting to revise the kit was planned by WHO EMRO to take place between April and June 2020, however this will be postponed due to COVID and should take place later in the year.</td>
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</table>
### VI. Program Challenges and Lessons Learned

#### A. Challenges

**Objective 1: NCD Materials Package**

- ** Tendering process delay:** There was a delay at the start of the project as the NCD materials could not be developed by Primary Care International, (as had been originally envisaged as they are a member of the Working Group). This was because the IRC procurement process required that IRC would own the materials; something that was not agreeable to PCI who wished to maintain ownership and copyright. This resulted in the need to source an external provider and has delayed the process. However, a provider was selected, and development of the materials was possible.

- **Budget constraints:** Furthermore, the resource package budget was limited, and therefore some resources that were identified in the NCD materials workshop in December 2018 were not prepared as part of the PEN-H. However, IRC and NCD working group members are discussing how these materials can be developed and collaborate on filling these gaps.

- **Training needs:** Another gap identified in the NCD materials workshop was the lack of suitable training materials. Although this gap cannot be filled as part of this project, IRC is looking at how to obtain funding to address this as well as use in-house resources to develop training materials for roll out of PEN-H.

- **Field test participation:** The PEN-H field test was participated in by only a small number of field staff. The timing wasn’t ideal as the period was August – October, when many IRC staff members were taking leave at the end of the fiscal year. Although the draft package was ready from mid-July, LSI did not want the field test to begin until they had secured permissions from WHO and others where their materials had been used, delaying the start of the field test period. As the feedback forms were only completed by 7 participants from the field, the feedback might not have been as comprehensive as anticipated, however it was still useful input for the revised version. Further input was later obtained in January 2020 in the workshop to review the PEN-H materials.
• **Adapting materials to humanitarian settings in a context of insufficient evidence-base:** The PEN-H protocols that have been drafted do not all seem to be well adapted to humanitarian settings, some of the feedback has included that more advice is needed when there are not medicines and technologies available to follow the evidence-based best practice, and what to do when patient referral is not possible. In addition, the lack of evidence-base on NCDs specifically in humanitarian contexts was a real challenge, and some of the PEN-H protocols appear more tailored to LMICs than humanitarian settings specifically. In the review process, some suggestions were made to LSI and Prof Mendis who were drafting the materials. However, they were concerned that a more pragmatic approach would not be in-line with evidence. One example of this was the suggestion from one of the NCD working group members to have the Diabetes patient glucose targets higher to avoid risking hypoglycemia, particularly as there is often food insecurity in humanitarian contexts. It was agreed that this could be amended with a caveat, but the lack of evidence remains a challenge. Similarly, Prof Mendis utilized the tobacco advice from the WHO PEN, however there is a lack of evidence base about the effectiveness of such an approach in humanitarian contexts. This is a challenge given that the aim was to maintain links to available evidence when developing these guidelines, To address this IRC and other partners will document use of the PEN-H and capture challenges and lessons learnt to be incorporated into future iterations of the document as well as during program delivery in the field.

• **Animation films:** The diabetes/hypertension animations have been developed with positive feedback from Libya and Uganda. However, it has also been mentioned that some of the food items are not well adapted to each setting, as these are generic animations to be used in various humanitarian contexts. It has also been raised that CHWs do not have blood pressure monitors in many settings. This is one of the challenges with creating material to be used globally, as it is not context specific to each country. However, IRC and partners have discussed availability of ready to use NCD diagnostics and follow up tools for CHWs and other less skilled health workers.

• **Dissemination activities delay:** There have been delays to some of the activities planned to disseminate the PEN-H in 2020, due to the COVID pandemic.

**Objective 2: NCD Kit Assessments**

• **Information about the kits:** Obtaining information on the WHO NCD kit initially was difficult. This required conversations with different WHO staff at different levels in headquarters, regional and country offices. It is still not clear where all the WHO kits have been disseminated in the countries where assessments are planned. The IRC, ICRC and IMC country offices also do not have access this information as the NCD kits have not been deployed to IRC, IMC or ICRC facilities, but have mainly been distributed to MoH-run clinics.

• **Collaboration agreement with WHO EMRO:** It was learned through meetings with WHO that a survey had already been developed to assess the NCD kits in Afghanistan, Syria and Iraq, however this only included quantification of the contents. Therefore, to avoid duplication and ensure consistency, it was decided between WHO and IRC that it would be best to use the same survey for that aspect of the assessment. Therefore, a collaboration agreement with WHO EMRO has required IRC to be approved through the stringent FENSA process. This required accumulation of numerous documents and the whole process took around 6 months, with the agreement finally signed in May 2019.

• **Permission in countries:** The WHO kit assessments have been delayed as there is a lengthy process to engage with WHO and MoH in each country to get the required ethical approvals and permissions to undertake the assessments. Although the plan is to undertake the data collection for the assessments in Yemen and Libya in November and December 2019, this is dependent on MoH letter of approval in both countries.

• **Feedback on tools:** Feedback on the data collection tools was slow and it took several months for key stakeholders to provide their input, so the tools could be revised.

• **Access and conflict status:** An additional challenge to the NCD kit assessments was the access and security situation in Yemen, Libya and South Sudan. For example, there was a restriction on IRC international staff travel to South Sudan in May 2019 and again in mid-February 2020, as well as a lack of access to some areas of South Sudan during raining season. There was an escalation of the conflict in Tripoli which meant the IRC data collectors who had been selected to collect the data were no longer available because of their own personal displacements in addition to new work priorities; therefore a consultant had to be sought and trained at short notice. In Yemen, it was only possible to get permission to do the assessments in the South due to the split administration as part of the ongoing conflict in Yemen.
Additionally, staff in Yemen were unable to leave for a face-to-face training on the data collection, so this had to take place virtually in Aden with IRC’s NCD Officer delivering the training remotely from London. Unfortunately, there was a widespread internet outage in Yemen in January 2020 when the training was scheduled, therefore the remote training delivery was very challenging.

- **Inaccurate / incomplete information:** There has been some inaccurate or incomplete information being received in communication with key partners such as WHO and MoH. In both South Sudan and in Yemen, the staff doing the data collection at the health facilities had been informed that facilities had received the NCD kits but on arrival at the sites they found out that the kit contents had not arrived, and therefore they were unable to conduct the assessments at those facilities.

**Objective 3: NCD Operational Guidelines Field Test**

- **Field test participation:** The operational guidelines field test has been participated in by IMC and IRC field staff, however, ICRC had already started their own field test before this began, and Save did not have capacity to engage their teams, therefore most of the feedback came from just two organizations’ staff. Another challenge has been the turnover of field staff, and their limited time to engage due to high workloads; this has sometimes meant that the participants from field sites have changes and delegated the participation to an alternative colleague, rather than the same staff participating in all three field test methodologies.

- **Crossover with PEN-H:** It was raised in the Nairobi workshop that one element of the PEN-H – the facility readiness checklist – could be better incorporated/annexed into the Operational Guidelines rather than the PEN-H which focuses more on clinical and community health tools. The facility readiness checklist has been referenced in the Operational Guidelines document with a link to PEN-H provided.

**B. Lessons Learned**

- **Appetite for improved NCD care:** It is evident that there is a real appetite to improve NCD care in humanitarian settings. Furthermore, field staff know what they need in order to do this and recognize the gaps. They have been willing to engage and have participated enthusiastically in the workshop and focus groups.

- **Information sharing:** Agencies working together has enabled really positive sharing of ideas. An example of this was the Nairobi workshop on NCD materials, which brought together several countries to share experience and solutions. The feedback from the workshop evaluation was very positive and highlighted that field staff learnt a lot from their counterparts from other countries.

- **Effective Working Group collaboration:** The Working Group on NCDs in humanitarian settings have a number of work areas, however progress has been slow. This project has helped to rapidly progress on some of the areas of work, through effective collaboration, and has enabled really positive sharing of ideas. The NCD Working Group members have been actively providing feedback on the PEN-H and were very pleased to see the findings of the Operational Guidance field test, which has been used to develop the final version. The NCD Officer acted as a secretariat for the working group and helped move projects along.

- **NCD training needs identified:** NCD training has come up as a key gap in all three project streams. It was discussed at both NCD materials workshops (December 2018 and January 2020), where it was highlighted by field staff that there is a lack of NCD training and lack of training materials. Furthermore, the NCD kit assessments also found a low level of NCD knowledge in the healthcare staff knowledge tests, and several key informant interviews also highlighted a training gap.

- **Monitoring & Evaluation needs:** It was clear from the NCD kit assessment findings that there was a lack of oversight from both WHO and MoH on kit distribution in all three countries. An improved M&E system for health kits could improve the kit use and prevent wastage of medicines being provided. It was also evident
that short-term NCD kit use could help with moving to individual medicine procurement, however an M&E system should be in place for kit use in future to help identify the true NCD medicine and supply needs at the health facility level.

Annexes:

Annex I: PEN-H Field Test Report (October 2019)
Annex II: Operational Guidelines Field Test Report
Annex IV: Yemen NCD Kit Assessment
Annex V: Yemen Dashboard (All)
Annex VI: Yemen Dashboard (Kit Only)
Annex VII: Libya NCD Kit Assessment
Annex VIII: Libya Dashboard
Annex IX: South Sudan NCD Kit Assessment
Annex X: South Sudan Dashboard
Annex XI: PEN-H Materials Package

Annexes are linked throughout the report. The full folder of annexes can be accessed here.