mPOWERING
FRONTLINE HEALTH WORKERS

Survey 2 Results
January 2014

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Executive Summary

mPowering Frontline Health Workers (mPowering) commissioned an initial content survey in August 2013. The survey was sent to 38 organizations as an information-gathering exercise focusing on content partners, as opposed to implementing partners. The goal of the survey was to have a landscape analysis of existing health content on maternal, child, and newborn health—broadly defined as including family planning / reproductive health (FP/RH); nutrition; and water, sanitation, and hygiene—for health workers and/or supervisors of health workers. The content could be in any form (paper, soft copy, mobile phone, tablet, download, etc.).

The questions in the survey related to mPowering being able to link to and/or host partner health content on the mPowering platform and inquired about the parameters within which partners are comfortable with content use. The survey contained 31 questions and was administered through SurveyMonkey. Twenty-one responses were received. Results identified organizations that have relevant health content (as defined above) and, of those, which organizations have content in digital formats and which are willing to share their digital content. Results also turned up information about accreditation, licensing, liability, and partnership. The information from the first survey is available in table format.

A second survey was conducted in November and December of 2013 to reach out to a longer list of organizations and get a broader idea of what maternal, newborn, and child health content is available. The survey targeted 218 people (in 116 organizations) and received 67 responses (from 52 organizations), for a 31% response rate. We therefore have a total of 86 responses from 73 organizations.

Results from the Second Survey

High interest in sharing content: Over 90% of respondents said that in principle they would be in favor of sharing their content.

Content available in maternal and newborn-related issues: Over 70% of respondents had content in FP/RH; almost 60% had content in antenatal care, breastfeeding, postnatal care, and/or nutrition; about 50% had information in neonatal care, labor and delivery, and/or HIV/AIDS; and over 30% had information on Integrated Management of Newborn and Childhood Illness. Other types of content available include information on cervical cancer, emergency obstetric care, water and sanitation, and midwifery education.

Various levels for audiences: Three-quarters (73% and 75%, respectively) of respondents indicated that their content was aimed at the global and/or national level; almost 70% indicated they had content aimed at a local audience.

Sources used to understand local needs: Of those organizations with content for **local audiences**, over 90% used government as a source to understand local needs; 75% used WHO guidelines; and around 70% consulted with local nongovernmental organizations (NGOs), got community feedback, and/or had user surveys or testing. About half used peer review or their organization's own internal quality assurance process, while over 40% consulted with national medical or nursing associations.

Wide variety of audiences for content: Almost 90% of respondents said that their content is designed to reach health workers, 65% have content for supervisors of health workers, 58% for mothers, and 40% for family members. Other audiences identified were associations, regulators, policymakers, program managers, and youth.

Content for a variety of health worker types: Among the organizations that have content for health workers, 87% indicated that content was developed for mainly low-level training, 66%

reported content was for mid-cadre staff such as nurses, 64% indicated supervisors, and 43% for untrained workers. Other content was available for medical students and midwives.

Wide variety of content purposes: Over 70% of organizations indicated the purpose of the content was job aids, 67% reported behavior change communications, 57% indicated reference materials, 40% patient case management, and 26% text messaging.

Some data is available in digital format: Thirty-eight percent of respondents responded “yes” to the question, “Is any of your organization’s content currently adapted for distribution on mobile phones and/or tablets?”; another 38% responded that “some” content was adapted for distribution on mobile phones and/or tablets.

Content is available in mobile format: Almost two-thirds (63%) of respondents indicated that their content is available on smartphone (e.g., iPhone, Android), 51% indicated tablet, 44% reported a format that functions in an offline environment, 42% said download direct to mobile, and 33% indicated a basic phone, preloaded.

Health content is available in various formats: Over 65% of respondents replied that content was available in soft copy (including available online) and/or print-based, 54% replied multimedia, followed by 33% with Short Message Service (SMS), 25% interactive multimedia, 14% with mobile-enabled Interactive Voice Response (IVR), and 8% with mobile-enabled Unstructured Supplementary Service Data (USSD).

Open access to content is high: Seventy-three percent of respondents said some of their content was publicly available (i.e., open source, free), 43% indicated some content was available only to their organization and select partners, and 35% reported that some content was available only as part of their organization’s programs.

Content packaging varies: Seventy percent of respondents indicated that their health content is part of a related package (but not locked together), and over half indicated content is available as individual, standalone pieces. Less than 40% reported content was part of a package of integrated pieces that were locked together.

Concerns about sharing data: In relation to the decision to share content, 35% of respondents replied that attribution was very important; 28% reported that user feedback, and 27% that access to the data collected by the platform, was very important; and 23% reported that liability protection was very important.

Incentives for sharing content: Respondents identified the following reasons, among others, as incentives for their organization to share content: “Better dissemination, standardization of content and approaches,” “Greater impact, increased user feedback and M&E opportunities,” “If we want to reach 1 million health workers we all need to share,” “Increase reach, avoid duplication of efforts,” “It's our mandate,” and “Learning and helping increase the body of knowledge available globally.”

Barriers to sharing content: Respondents identified the following reasons, among others, as barriers to their organization sharing content: “Concerns about adaptations of material that would affect the quality, accuracy of the material,” “Country ownership. We have 60+ country programs and it is hard to get most up to date info,” “Liability, concerns about modification or use without attribution,” and “Not giving recognition [or] attribution and or [not] being part of the core implementing team [to ensure content is being used as originally intended].”

Recommendations

As the results of the survey show, there are already a number of organizations providing health content in the area of maternal, child, and newborn health—defined as including FP/RH; nutrition; and water, sanitation, and hygiene—for health workers or supervisors of health workers. Content is

available in a variety of forms, including digital. Also, the interest in sharing and aggregating the content seems to be high. However, the survey also shows some issues that need to be addressed. Recommended follow-up steps for mPowering:

- Contact the 45 respondents in the second survey and the 16 respondents in the first survey who expressed interest in further discussing survey responses.
- Create a system or guidelines for attribution, liability protection, and content protection.
- Test how best to aggregate and distribute content efficiently and effectively.

Background

mPowering Frontline Health Workers (mPowering) commissioned an initial content survey in August 2013. The survey was sent to 38 organizations as an information-gathering exercise focusing on content partners, as opposed to implementing partners. The goal of the survey was to have a landscape analysis of health content on maternal, child and newborn health—defined as including family planning / reproductive health (FP/RH); nutrition; and water, sanitation, and hygiene—for health workers or supervisors of health workers. The content could be in any form (paper, soft copy, mobile phone, tablet, download, etc.).

The questions in the survey related to mPowering being able to link to and/or host partner health content on the mPowering platform and inquired about the parameters within which partners are comfortable with content use. The survey contained 31 questions and was administered through SurveyMonkey. Nineteen responses were received. Results identified organizations that have relevant health content (as defined above) and, of those, which organizations have content in digital formats and which are willing to share their digital content. Results also turned up information about accreditation, licensing, liability, and partnership. The information from the first survey is available in table format.

A second survey was conducted in November and December of 2013 to reach out to a longer list of organizations and get a broader idea of what maternal, newborn, and child health content is available. The survey targeted 218 people (in 116 organizations) and received 67 responses (N; from 52 organizations), for a 31% response rate. Not all respondents answered each question. The number of respondents replying to each question (n) is noted in the "Results" section below.

Methodology

A consultant reviewed the first content survey with the mPowering team to see which questions, if any, needed to be adapted. The first survey was modified only slightly to ensure that comparisons between the two surveys were possible. Six questions from the first survey were dropped from the second survey, and other questions were clarified.[*]

The consultant drew up a long list of possible organizations to contact. Originally, the goal was to have a final shortlist of between 25 and 30 global and/or country-based organizations that provide learning resources for frontline health workers. However, the mPowering team decided to enlarge the scope of the survey with the aim of creating a more comprehensive landscape of existing reproductive, maternal, newborn, and child health content and went with a longer list (116 organizations).

The survey was carried out over the period of November 27 to December 26, 2013, and was sent via SurveyMonkey from a personal email account. If the consultant knew the recipient, the email was personalized. The first deadline for the survey was set for December 6 in order to gather some information for the mPowering team's Steering Committee Meeting, which took place on December 12 in Washington, DC. Preliminary results showed that the personalized emails worked much better in terms of garnering results; therefore, all reminders were sent as emails from a Gmail account so they could be formatted (as was not possible within SurveyMonkey) and personalized. The second deadline was December 31, and reminders were sent out on December 10, 18, and 26.

Results

[*]Some of the modifications were made in response to participant feedback on the first survey.

High Interest in Sharing Content

Interest in sharing content with a potential mPowering database of digital content is high. Over 90% of respondents (n=66) said that in principle they would be in favor of sharing content (Question 2). Comments included:

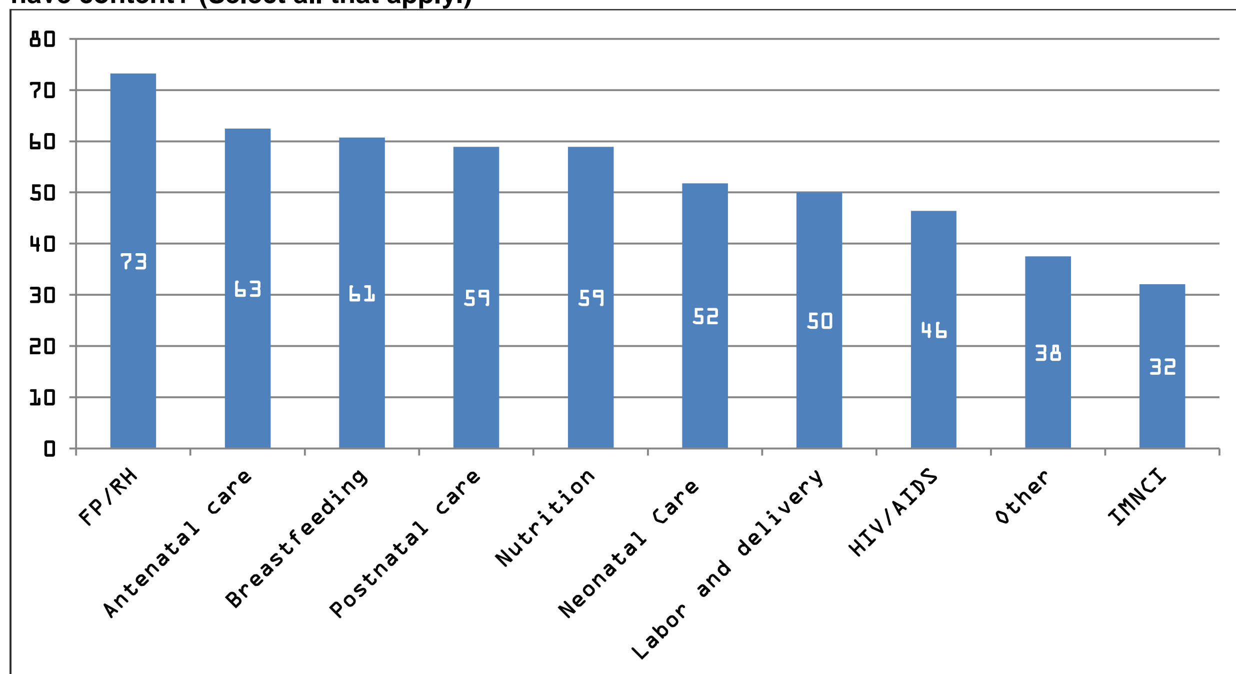
- It would depend on the project and the client
- Yes, but only if protections are put in place that do not allow modification. That will be an issue for many, I imagine!
- Decision must be made by management
- Yes, but … we would want to know where it was going to be used and by whom. We do not want anyone taking the content, programming it into a simple form and calling themselves a doctor as we do not believe that an untrained person can use these tools nearly as well as a trained person who would use them to guide and remind them.
- Yes, however we need to follow branding guidelines per Johns Hopkins University as pertain to copyright. In general though, we can share content as long as name/logo remains intact. Also, content we create is often made possible through USAID-funded projects, so the USAID branding and copyright needs must be retained.

Content Available by Topic

Also, there seems to be a good amount of content in the area of maternal and newborn-related issues. In answer to Question 3, 90% of the 67 respondents indicated that their organization has content for or about reproductive, maternal, and newborn health (including FP; nutrition; and water, sanitation, and hygiene).

Question 4 asked, "On which of the following maternal and newborn-related health topics does your organization have content?" Over 70% of respondents (n=56) reported content in FP/RH; around 60% had content in antenatal care, breastfeeding, postnatal care, and/or nutrition; about 50% had information in neonatal care, labor and delivery, and/or HIV/AIDS; and over 30% had information on Integrated Management of Newborn and Childhood Illness.

Q4. On which of the following maternal and newborn-related health topics does your organization have content? (Select all that apply.)



Note: Reported in percentages.

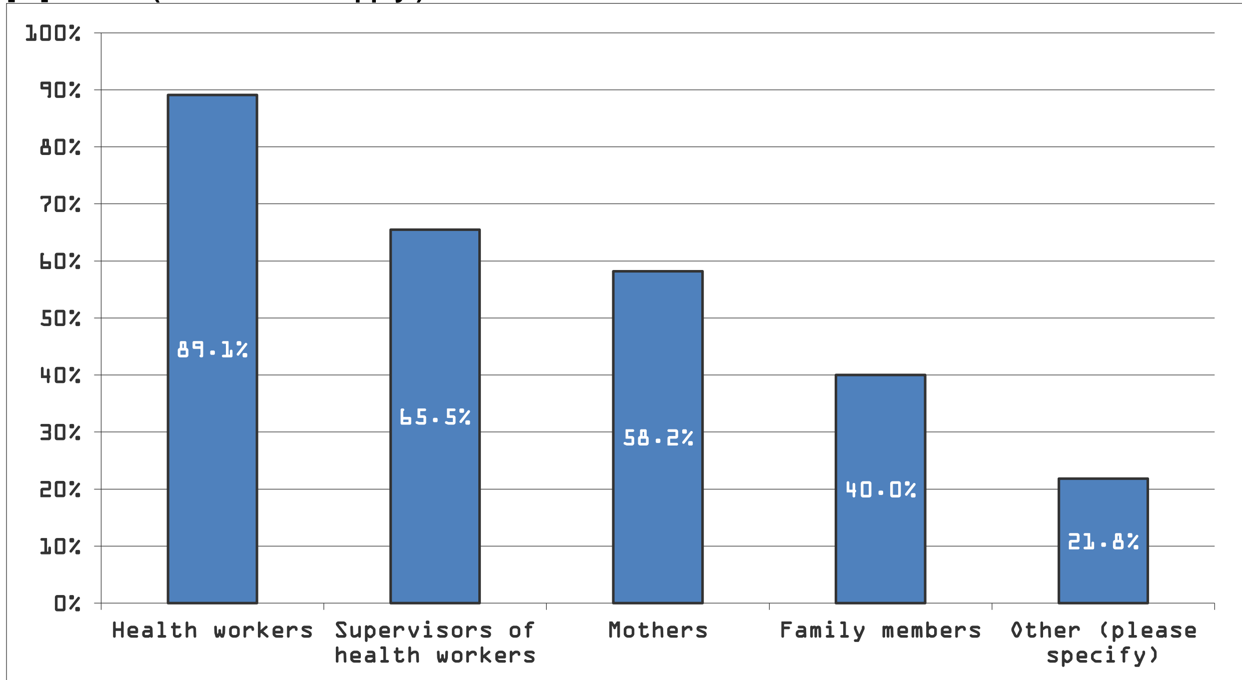
Clarifications of “other” types of content included:

- Cervical cancer, basic obstetric ultrasound; HIV / AIDS is on our 'to be developed' list, along with many more topic areas.
- Emerging zoonotic and infectious diseases
- EmOC [emergency obstetric care] - may not be appropriate for FLWs [Frontline Workers] initiative
- Home based newborn care
- infant diarrhea, infant pneumonia (each is separate and not combined as in IMCI [Integrated Management of Childhood Illness])
- Management of health workers (cross-cutting)
- Midwifery Education
- Water and Sanitation

Audience

The Q5 chart shows that the majority of the maternal and newborn health-related content of respondent organizations (of which there were 52 for this question) was designed to reach health workers (almost 90%), followed by supervisors (65%), mothers (58%), and family members (40%).

Q5. What audience is your organization's maternal and newborn health-related content designed [to] reach? (Select all that apply.)

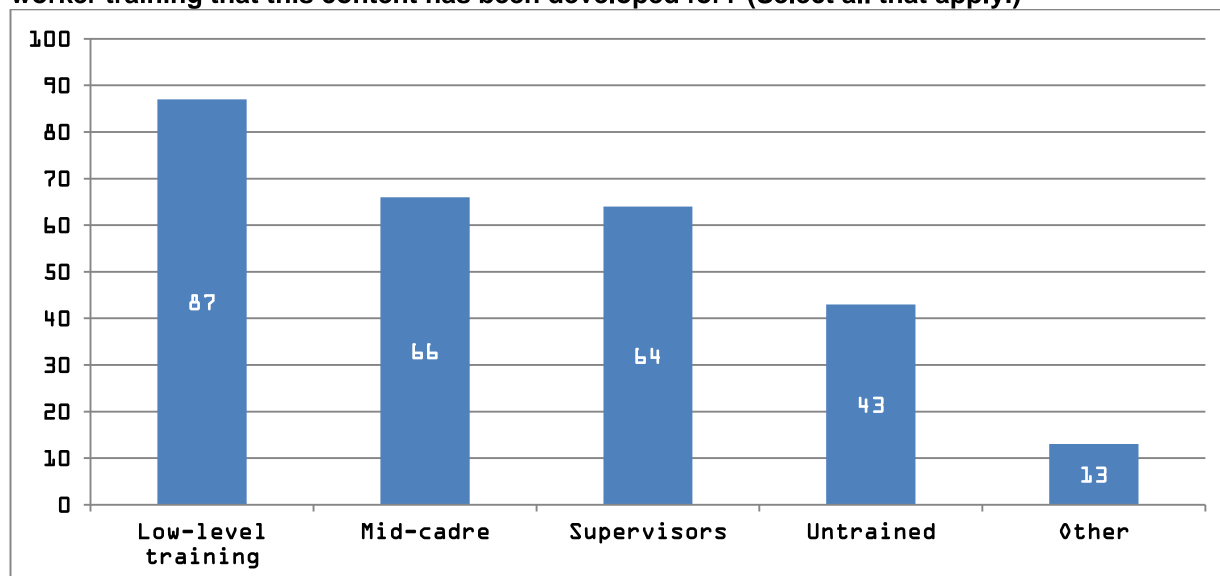


"Other" audiences included:

- Associations, Regulators, Governments
- Community health workers, local supervisors/supporters of community health workers
- Policy makers
- Program managers
- Youth ages 12-19 through peer education program

Question 6 asked organizations that have content for health workers about the **anticipated level of health worker training** that the content has been developed for. Respondents (n=53) reported content was mainly for low-level training (87%); followed by mid-cadre, such as nurses (66%); supervisors (64%); and untrained workers (43%).

Q6. If your organization has content for health workers, what is the anticipated level of health worker training that this content has been developed for? (Select all that apply.)



Note: Reported in percentages.

"Other" included the following responses:

- Health care professionals and providers across disciplines and specialties
- Medical students, Residents, MDs, PAs [physician assistants], Nurses
- Midwives
- Physicians, Allied Health workers

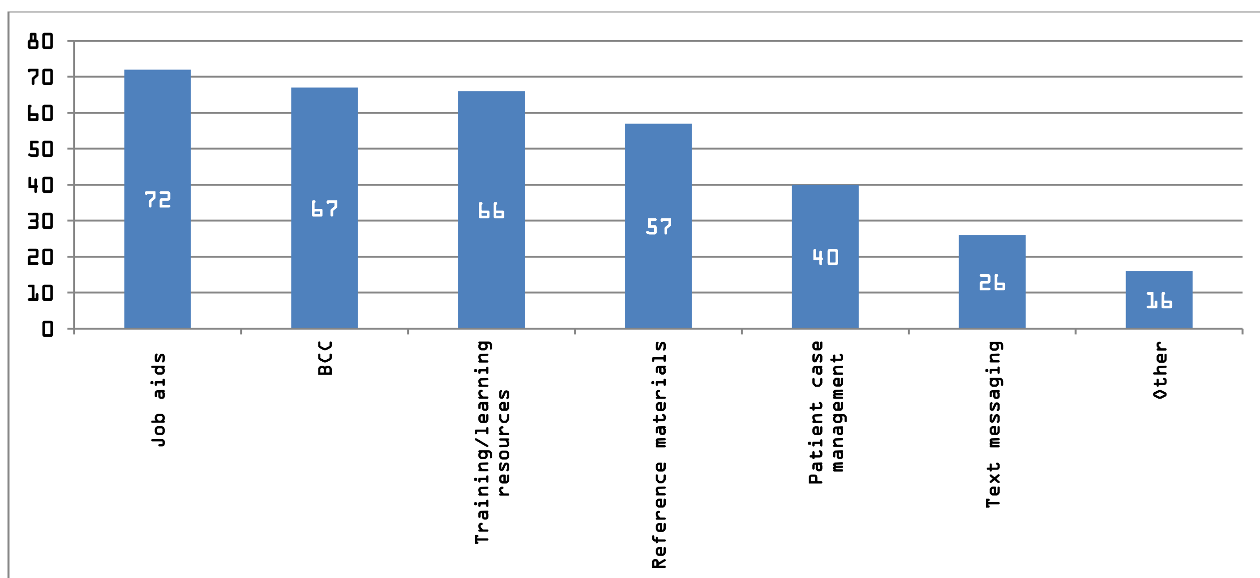
Open Access to Content

According to this survey, open access to the content will not be a serious obstacle. Question 7 asked "What is the nature of your organization's content?" Of the respondents (n=56), 73% indicated at least some content was open source, 23% reported that content links to an external website, and only 16% indicated that it is a mixture of free content and fee-based content. Respondents commented:

- A lot of our content is open source, and some content is owned by organizations we work with and requires their permission to use.
- At this point it's been mostly created for internal use but we'd be happy to share
- Content is copyright protected, all of it. No modification without permission.
- Custom content
- We do not charge for the content but do control who can access it so we don't end up with untrained people using these tools and pretending they are doctors

Responses to Question 8 on the **purpose of the content** (n=58) revealed that the majority of the content is job aids such as checklists and diagnostic trees (72%), behavior change communications (BCC) (67%), training/learning resources such as quizzes or narratives (66%), and reference materials (57%), followed by patient case management (40%) and text messaging (26%).

Q8. What is the purpose of the content? (Select all that apply.)



Note: Reported in percentages.

Responses under "other" included:

- Clinical Decision Support Apps
- Electronic data capture in the form of patient registration and electronic health records for maternal, newborn and child health.
- Facilitator manuals, flipcharts
- Film learning resources - often used as job aids and can be used as reference materials, although primary aim is knowledge and behaviour change.
- In Nigeria, all will be components of the national ICT [information and communication technology] for Saving One Million Lives initiative.
- MNCH [maternal, neonatal, and child health]
- To inform health program staff and IT/ICT personnel to find, learn about and share best practices on ICT & Information Technology in their field/program work

Question 9 addressed **how the content is made available**. Respondents (n= 57) noted that the majority of content is part of a package of related pieces of content (but the pieces are not locked together; 70%), and 54% reported that content is available as individual, standalone pieces of content (54%). Less than 40% reported that the content was part of a package of integrated pieces (locked together). Comments included:

- There are multiple programs with different objectives so there is not one stock answer.
- As mobile job aid tools.
- Most of the content will be relatively "packetized", but generally the content will also be closely tied to the platform(s) on which they are implemented (i.e., CommCare application), even though there are pieces of it that could be extracted. Dependency between content seems different to me than dependency between content and technology-- the latter would potentially limit reuse.
- Delivery of content is mainly through partners, who may integrate content to within their own open source structures.
- This depends on the country context.
- Web

Some Data in Digital Format

Another positive data point is the amount of content that is already in some kind of digital format. Question 10 asked, “Is any of your organization’s content currently adapted for distribution on mobile phones and/or tablets?” Of the respondents (n=56), 38% replied “yes,” another 38% replied “some,” and only 25% replied “no.” Respondents were asked to explain, if their answer was “some,” as well as give an estimated percentage of mobile content. Results included:

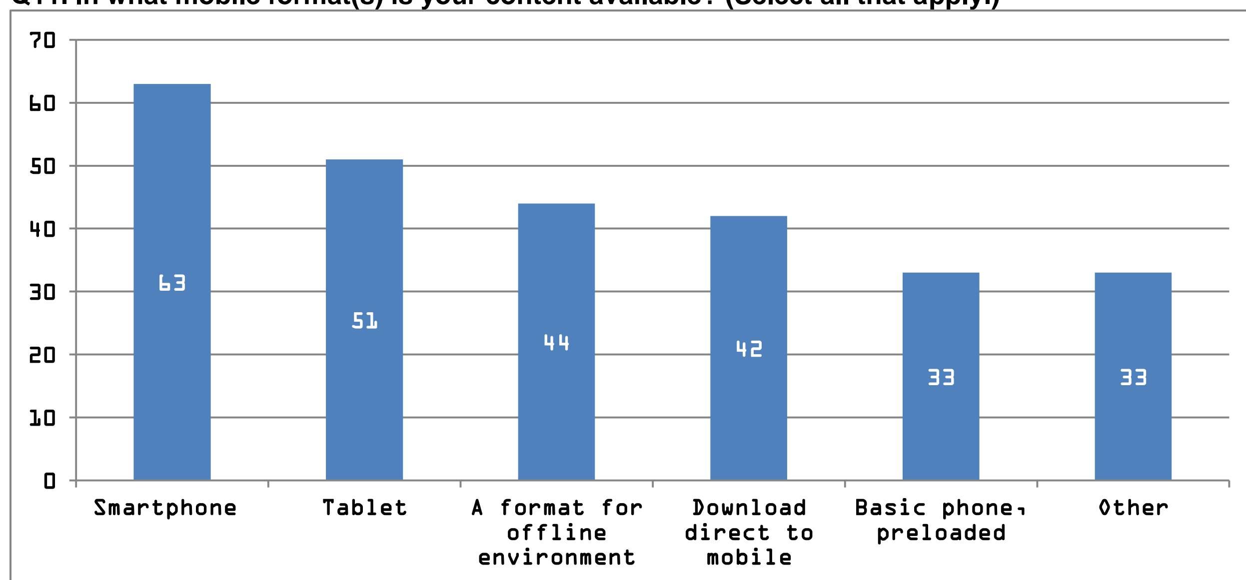
- 10%
- 12-15 messages tailored to individuals (women couples)
- 3-5% case management in Mexico, TB in Peru, vital events surveillance in Rwanda
- All is available for usage on mobile, although we are undertaking a project to shorten the file sizes for mobile and other uses - approx. 50% of content is already presented like this and 50% is to be chaptered [broken into chapters].
- Hesperian has content on pregnancy and birth adapted for smartphone and tablet use (our Safe Pregnancy and Birth app)
- Home-based newborn care content as job aid for ASHAs [Accredited Social Health Activists, community health workers in India] and ANMs [auxiliary nurse-midwives] for mobile phones
- LARC [long-acting reversible contraception] Locator Tool, Webinar Audio
- Most is not however we are working on adapting content, and developing new content that is specifically light and usable via mobile.
- Our website is mobile friendly, content also distributed through twitter
- SMS [Short Message Service], one mobile app
- The work we are doing through the Gates funded Nigerian Urban Reproductive Health Initiative is content engineered for mobile phones. There is also a decision tree application for contraceptive technology called ACE and various SMS based projects.
- We have an IVR [Interactive Voice Response] family planning refresher training being delivered in Senegal - the content is in French and available in English - since it is IVR, we have recorded audio content. We also have FP/MCH [maternal and child health] content for CHW's [community health workers] in our mSakhi Android software implemented in India. It is currently in Hindi but in process of being translated into English.
- Website is accessible via any feature phone, smartphone or tablet with internet access via browser

Question 11 asked, “In what mobile format(s) is your content available?” According to the 43 respondents, the majority of **types of mobile format** in which content is available are expensive options: smartphone (e.g., iPhone, Android) at 63% and tablet (51%) versus other formats, such as a format that functions in an offline environment (44%), download direct to mobile (42%), and a basic phone, preloaded (33%). A third of respondents selected “other” and explained:

- Some content is also available online, on www.commcarehq.org/exchange
- Basic phone, not preloaded for CycleTel (SMS)
- Interactive Voice Response (this is neither preloaded or downloaded so it does not fit into the categories above)
- Most of the content is text / audio which could be on any device.

- Offline toolkits of material for use in community health worker capacity building and client interaction (IPCC [Internet-based patient-provider communication services]), eLearning courses (online and offline), videos, spots, etc. available online or via download.
- On computers and viewable by phone/tablet
- Our website is mobile friendly, content also distributed through twitter

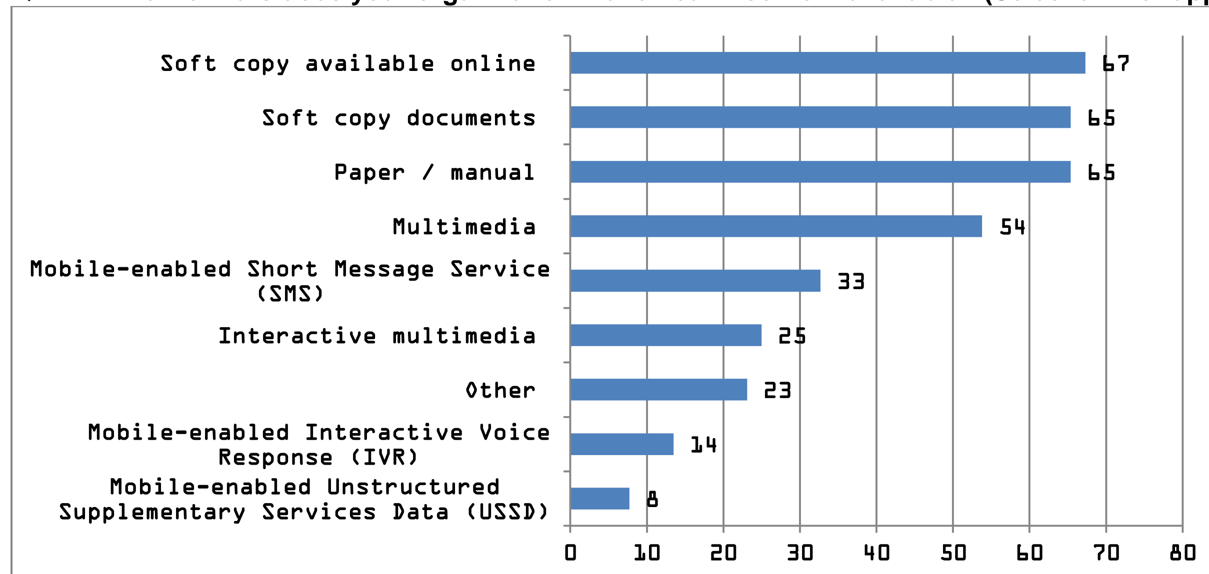
Q11. In what mobile format(s) is your content available? (Select all that apply.)



Note: Reported in percentages.

Question 12 asked broadly, "**In what formats does your organization make health content available?**" Of the 52 respondents, around 65% replied soft copy (including available online) and/or paper/manual; 54% replied multimedia, followed by 33% with SMS, 25% interactive multimedia, 14% with mobile-enabled IVR, and 8% with mobile-enabled Unstructured Supplementary Service Data (USSD).

Q12. In what formats does your organization make health content available? (Select all that apply.)



Note: Reported in percentages.

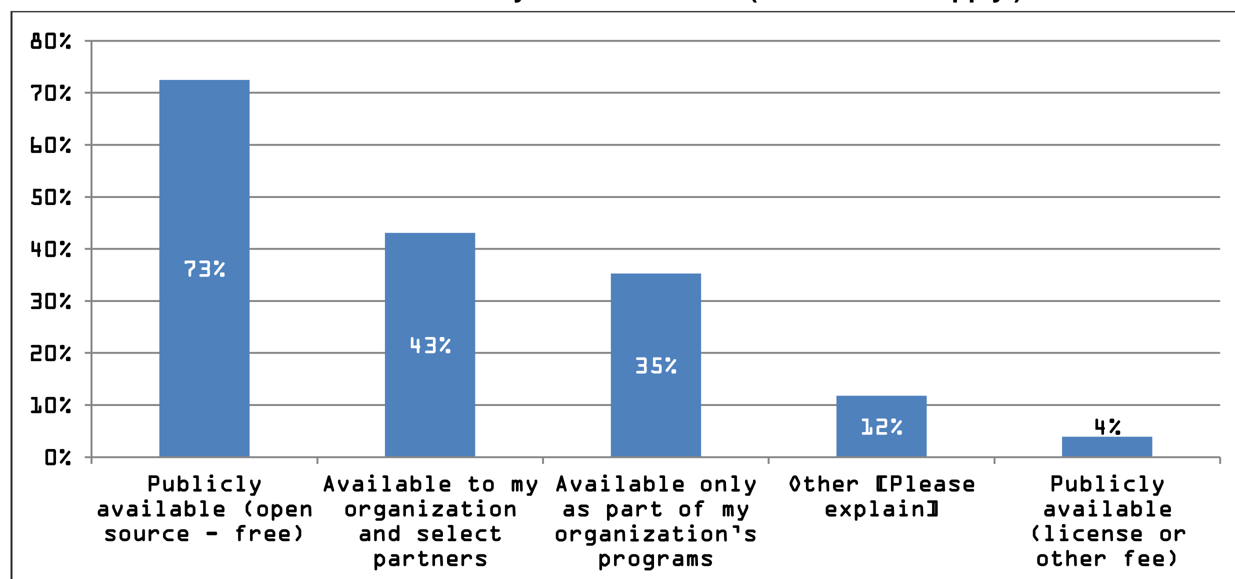
Among the 23% that replied "other," responses included:

- Electronic protocols - mobile, tablet Electronic dashboards - internet
- Mobile apps
- Offline interactive eToolkits (delivered via durable netbook) and available for download to PC.
- Only currently expanding into video, specifically community-led videos in India (in Oriya language), and also looking at expanding into mobile or video for elsewhere but not far in that process yet.
- Our content is available as Moodle courses—as that's what we use for the course development/authoring process. Although really the courses are specifically designed/adapted to run on mobiles rather than to be used/viewed via Moodle.
- Our content is part of mobile applications
- Power point presentations on training. We are working at MCHIP [Maternal and Child Health Integrated Program] on message based reminders for micronutrient supplementation.
- Protocols

In terms of **how the content is currently made available** (Question 13), of the 51 respondents, 73% replied that their organization's content is publicly available (open source, free), while 43% reported that it was available to their organization and select partners. Thirty-five percent reported that the content was available only as part of their organization's programs, while 4% said that it was publicly available (license or other fee). Those replying "other" commented:

- A lot of the content we use is open source while other content is created by partner organizations that need to give permission to share.
- Depends on the content. Most is openly available via K4Health.org
- Mixture of free open source (CommCare Exchange) and by request via email.
- No fee, but while free, no modification allowed
- We are happy to share content, but haven't had many requests to do so. Sharing has been on a one-off basis (we don't have a standardized process for it).

Q13. How is this health content currently made available? (Select all that apply.)

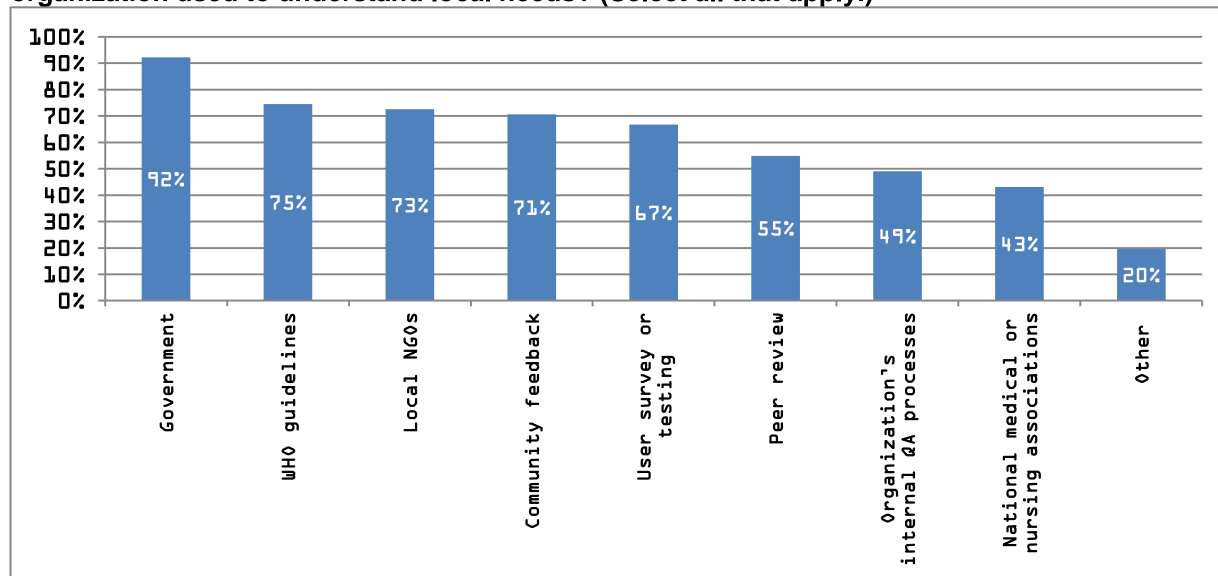


Question 14 addressed the audience for the organization's content, asking, "**Which audience is the content your organization has developed most relevant for?**" Respondents (n=52) replied the audience was "global" (73%), "national" (75%), and "local," such as district or lower level (69%). Those replying "other" commented:

- Varies
- While we are beginning to scale our technology nationally in several countries, we are committed to ensuring that content itself is localized.
- Content varies by level of intended audience.
- Global protocols and best practice for sub-Saharan and low resource settings - although being used across the world, despite cultural focus on Sub-Saharan Africa
- Is for use by primary level workers but is adapted to the national contexts where we work

Question 15 addressed those respondents who replied that their content was most relevant for local audiences and asked **what sources the organization used to understand local needs**. Replies (n=51) indicated that 92% looked to the government, 75% followed WHO guidelines, 73% consulted with local nongovernmental organizations (NGOs), 71% got community feedback, and 67% had user surveys or testing. Another 55% used peer review, just under half (49%) used their organization's own internal quality assurance (QA) processes, and 43% consulted with national medical or nursing associations.

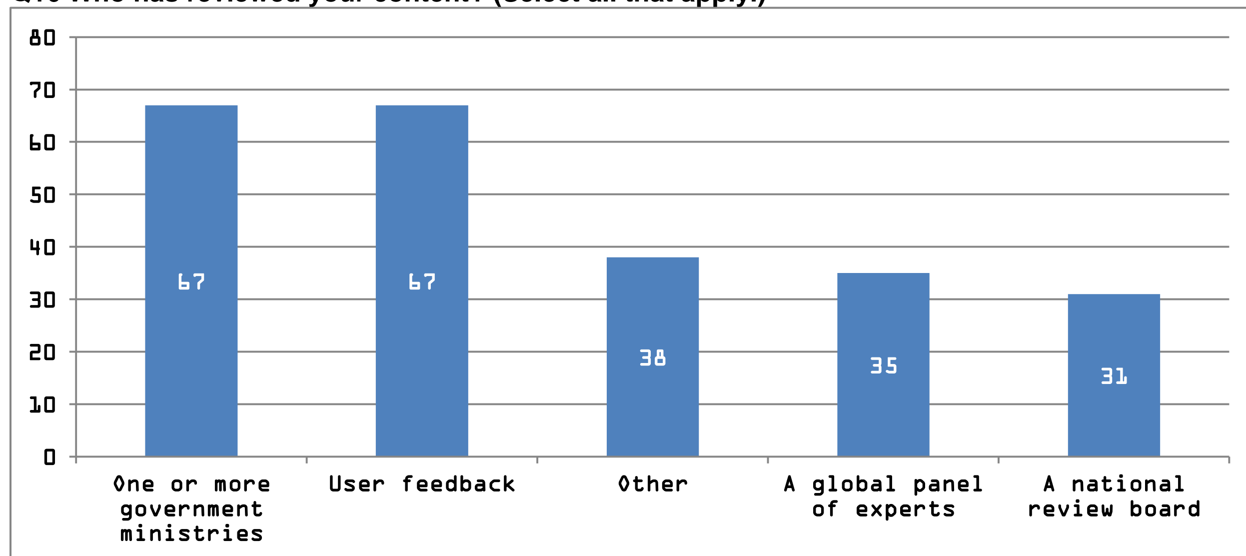
Q15. If your content has been written or adapted for local audiences, what sources has your organization used to understand local needs? (Select all that apply.)



Those who selected "other" replied:

- Frequently work with multiple levels of audiences, but place greatest emphasis on end users (typically community health workers)
- All of the above! And through our network of over 850 organisations and individuals as well as communities of practice such as HIFA2015 [Healthcare Information For All by 2015]
- All of the above, working with local and international advisors at local level by supporting the facilitation of and participation in a BCC working group to identify and vet all material.
- International Professional Associations (ICM [International Confederation of Midwives], ICN [International Council of Nurses], FIGO [International Federation of Gynecology and Obstetrics])

Q16 Who has reviewed your content? (Select all that apply.)



Note: Reported in percentages.

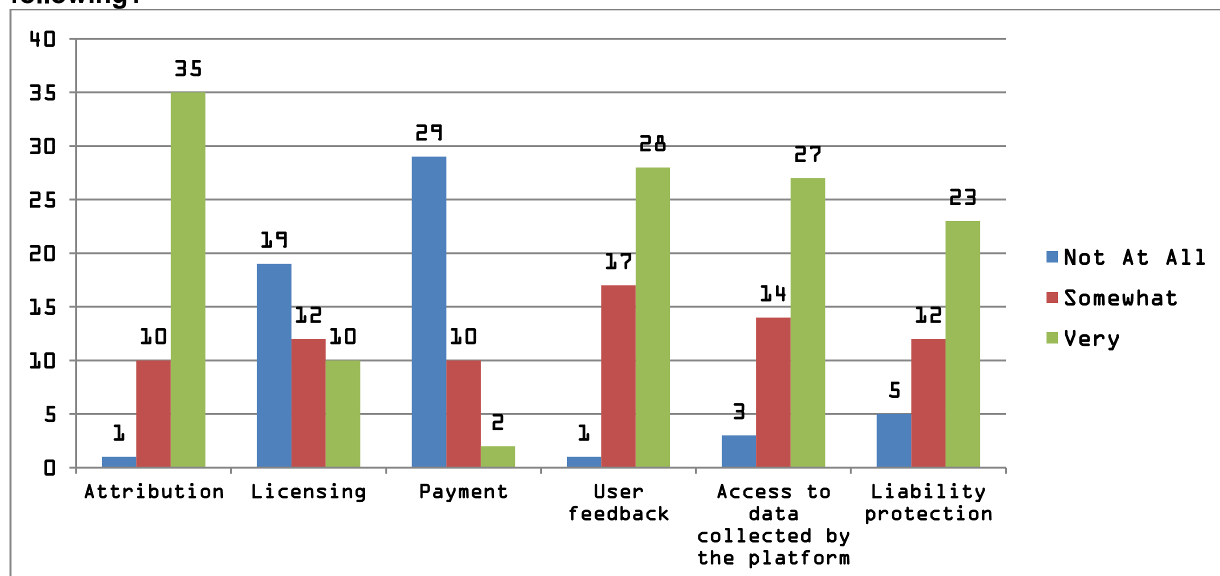
Responses to Question 16 (n=48) show that over two-thirds of respondents have **content reviewed** by one or more government ministries and/or get user feedback. Close to one-third have content reviewed by a global panel of experts and/or a national review board. Responses to “other” include:

- Again it depends on the project as to which sources are used.
- All Hesperian content is reviewed through a Field Testing process to vet and ensure accuracy and accessibility of the content by medical experts, international health professionals, and grassroots/ community level health workers.
- As training was carried out and thus feedback was obtained, the curricula was continually revised
- Depends on which content. In some countries, ministries; in others, tested by users; some by WHO
- For some-international technical advisory group (ICM, FIGO, ICN members), for others, just user feedback, peer review. it depends
- ICM, ICN, FIGO, UNFPA [United Nations Population Fund]
- Internal experts
- MCHIP nutrition team
- MOTECH [Mobile Technology for Community Health] Suite
- Technical advisory boards in-country. Assessed through studies, surveys and material validation processes with different audiences
- Through medical advisory panels per film, ratification through government and local boards are proposed through our partners. We have a continual review process.

Concerns to be Addressed

However, the study did illuminate some areas that need to be addressed. Respondents (n=48) replied that **attribution** (35%), **user feedback** (28%), **access to data collected by the platform** (27%) and **liability protection** (23%) were **very important** to their decision to share content.

Q17. In considering whether to share your content with mPowering, how important are the following?



Note: Reported in percentages.

Comments included:

- Access to data essential if to be used in PIH [Partners in Health] sites
- Answers to these questions depend on the various partner organizations we work with that develop the content.
- Would need more information. Currently not sharing clinical electronic protocols outside of programs.

When asked the **form of licensing** used for the organization's content (Question 18), 70% of the 23 respondents reported Creative Commons. Comments under "other" included:

- Copyright, free reproduction, no modification without permission
- Depends on contracts/grants requirements
- It depends on various partners' wishes.
- Licensing only for content related to specific patented and branded products
- None at the moment
- While this [Creative Commons] is generally true, not 100% sure if it is organization-wide

Regarding the **updating of content** (Question 19), of the 48 respondents, 38% replied that their organization's content is updated infrequently (less than once per year), 38% said periodically (every 6–11 months), and 29% replied that content is updated frequently (every 1–5 months).

Information to be Followed Up

Question 20 collected information from respondents about other potential respondents (n=45). Question 21 requested information on URLs where the mPowering team could go to learn more about the specific types of health content that the respondents' (n=43) organization has available. Forty-five respondents indicated that they could be contacted for further information (Question 25). Nineteen people added other comments, per Question 26, "Is there anything else you would like to add?"

Sample Answers to Open-Ended Questions

Aside from Question 26, three open-ended questions were included in the survey.

Q22. What do you believe are the biggest barriers to your organization sharing content? (n=36)

- Awareness of the resource in general
- Concerns about adaptations of material that would affect the quality, accuracy of the material.
- Copyright infringements
- Country ownership. We have 60+ country programs and it is hard to get most up to date info.
- Funding to keep websites active beyond the end date of the project
- Getting the necessary review and approvals from all stakeholders to share.
- Liability, concerns about modification or use without attribution
- Not giving recognition [or] attribution and or [not] being part of the core implementing team [to ensure content is being used as originally intended].
- Our decentralized nature means we don't always know what's available internally
- Time to focus on settings outside of your own
- USAID branding and marking requirement; Need to know how it is being used

Q23. What do you believe are the greatest incentives to your organization sharing content? (n=39)

- Better dissemination, standardization of content and approaches
- Desire to share materials, lessons learned, tools developed.
- Exposure to the content by a range of users who may find it beneficial!
- Greater impact, increased user feedback and M&E opportunities
- Have more people test out the content and algorithms they have developed, contribute to community of practice.
- Helping others to improve RH programming and receiving feedback to improve our products.
- If we share, others will share with us - it will create synergies and collaborations and allow us to leverage each other's success and not reinvent any wheels.
- If we want to reach 1 million health workers we all need to share
- Increase reach, avoid duplication of efforts.
- It's our mandate.
- Learning and helping increase the body of knowledge available globally
- Less time reinventing the wheel. Improved content.
- Public health need
- Reaching wider audience or scaling up Avoiding reinvention by other organization, better use of limited resources

- That we want to save as many lives as possible, regardless of who gets credit.

Q24. How does or might your organization like to be recognized for sharing content? (n=33)

- Attribution and acknowledgement is good.
- Attribution and consent for amendments to ensure technical accuracy.
- Branding/logos
- Copyright acknowledgments after request. Appropriate citing.
- Credits linked to the resources, source of the content
- Mentioned the source of the content when the content is used. Be able to use the data form all sources that use the content
- Organization's logo and name on site. Recognition in peer-reviewed journal articles and conference presentations. Invited participation in technical working groups.
- Recognition as partner in this initiative—access to data on usage, feedback, development work together, and funding opportunities/funding for involvement where applicable. Specific recognition for content with logo, name, and where possible a link to website.
- We do not want groups using our work without ensuring that it will be used correctly since misuse can lead to patient deaths for which we are responsible.

Recommendations

As the results of the survey show, there are already a number of organizations providing health content in the area of maternal, child and newborn health—defined as including FP/RH; nutrition; and water, sanitation, and hygiene—for health workers or supervisors of health workers. Content is available in a variety of forms, including digital. Interest in sharing and aggregating the content seems to be high. However, the survey also shows some issues that need to be addressed.

Follow-Up and Next Steps

Recommended follow-up steps for mPowering:

- Contact those respondents who expressed interest in further discussing survey responses (n= 45) to get more information.
- Create a system or guidelines for attribution, liability protection, and content protection.
- Begin collecting small amounts of content so as to test out how best to aggregate and distribute content efficiently and effectively.
- Send survey findings to those respondents (n=38) who requested a copy of the survey findings.
- mPowering may wish to collect more information based on responses to Question 3.
- mPowering may wish to contact additional organizations (for example, Ashoka, The Center for Health Market Innovations [CHMI], Children’s Health Fund, George Washington University School of Medicine and Health Sciences [SMHS], Global Health Bridge, GW Medical Faculty Associates, Johns Hopkins School of Public Health, The Population Council, and Terikunda Jekulu).
- Use personalized emails in future surveys as the evidence demonstrates this improves the number of returns.

- Keep content short in reminder emails, noting only a reminder about the survey and the link.
- Amend the following questions:
  - Question 15: Add “Not relevant” as a response to distinguish between those who do not have content written for local audiences and those who skip the question because they do not want to answer.
  - Question 16: Split this question into two questions since mPowering wants specific examples of what global panels respondents are using.
  - Add an open-ended question after Question 16: “If your content was reviewed by a global panel of experts, please provide examples.” This will help distinguish the examples from respondents’ explanations of their “other” responses.
  - Question 22: Delete “being” so the question reads, “What do you believe are the biggest barriers to your organization sharing?”

Annex 1: Copy of Survey 2

mPowering Frontline Health Workers Initiative - Content Survey Part 2

Thank you for taking this short survey about health content for mPowering Frontline Health Workers.

The survey should only take 5 to 10 minutes of your time. The goal of the survey is to have a landscape analysis of who is doing what in this area. You will have an opportunity during the survey to request a summary of results.

We are seeking to identify health content that your organization or project has on maternal, child and newborn health, including family planning / reproductive health, nutrition, and water, sanitation and hygiene for health workers or supervisors of health workers. Content can be in any form (mobile phone, tablet, download, etc.)

For more information on our organization, go to http://mpoweringhealth.org/.

***1. Please provide your contact information. (*Required)**
Full Name
Job Title
Organization
Email Address
Phone Number

2. The mPowering Frontline Health Workers Initiative (mPowering) is seeking high-quality digital health content to add to a platform it is building to increase the awareness and accessibility of digital health content to frontline health workers and their supervisors. In principle, is your organization open to sharing content, so long as clear attribution is provided?
Yes
No
Don't Know (please explain)

3. In the early stages of implementing the content platform, mPowering would like to focus on maternal and newborn health (including preterm and low birth weight) content. Does your organization have content for or about maternal and newborn health (including family planning, reproductive health, nutrition, and water, sanitation, and hygiene)? Note: We will ask you about other content topics later in the survey.
Yes
No
Is there anyone else you can think of who we should contact in your organization or in another organization?

4. On which of the following maternal and newborn-related health topics does your organization have content? (Select all that apply.)
Antenatal care
Labor and delivery
Postnatal care
Integrated Management of Newborn and Childhood Illness (IMNCI)
Neonatal Care (includes preterm and low birth weight babies)
Breastfeeding
Family Planning / Reproductive Health
Nutrition
HIV/AIDS
Other (please specify)

5. **What audience is your organization's maternal and newborn health-related content designed [to] reach? (Select all that apply.)**
   Health workers
   Supervisors of health workers
   Mothers
   Family members
   Other (please specify)

6. **If your organization has content for health workers, what is the anticipated level of health worker training that this content has been developed for? (Select all that apply.)**
   Untrained
   Low-level training (e.g., auxiliary or community health workers)
   Mid-cadre (e.g., nurse)
   Supervisors of health workers
   Not relevant
   Other (please specify)

7. **What is the nature of your organization's content? (Select all that apply.)**
   Open source (free)
   A mixture of free content and fee-basis content
   All content is fee-basis or by license
   Links to an external website
   Other (please specify)

8. **What is the purpose of the content? (Select all that apply.)**
   Job aids (e.g., checklists and diagnostic trees)
   Behavior change communications
   Patient case management
   Text messaging
   Training/learning resources (e.g., quizzes, narratives)
   Reference materials
   Other (please explain)

9. **How is this content made available? (Select all that apply.)**
   As individual, standalone pieces of content
   As part of a package of related pieces of content (not locked together)
   As part of a package of integrated pieces of content (locked together)
   Other (please explain)
10. **Is any of your organization's content currently adapted for distribution on mobile phones and/or tablets?**
    Yes
    No
    Some
    If answer is "Some" (please explain, including an estimated percentage of mobile content)

11. **In what mobile format(s) is your content available? (Select all that apply.)**
    Basic phone, preloaded
    Download direct to mobile
    Smartphone (e.g., iPhone, Android)
    Tablet
    A format that functions in an offline environment
    Other [Please explain]

12. **In what formats does your organization make health content available? (Select all that apply.)**

Paper / manual (printed leaflets, diagrams, etc.)
Soft copy documents shared via email, shared drive (e.g., .pdf, .doc, .ppt)
Soft copy available online (e.g., viewable and/or downloadable files)
Multimedia (e.g., audio, video, animation [including .wav, .mp3, flash, etc.])
Interactive multimedia (e.g., quizzes, games, etc.)
Mobile-enabled Interactive Voice Response (IVR)
Mobile-enabled Short Message Service (SMS) / text messaging
Mobile-enabled Unstructured Supplementary Service Data (USSD)
Other [Please explain]

13. How is this health content currently made available? (Select all that apply.)
Available only as part of my organization's programs
Available to my organization and select partners
Publicly available (open source, free)
Publicly available (license or other fee)
Other [Please explain]

14. Which audience is the content your organization has developed most relevant for? (Select all that apply.)
Global
National
Local (e.g., district or lower level)
Other [Please explain]

15. If your content has been written or adapted for local audiences, what sources has your organization used to understand local needs? (Select all that apply.)
WHO guidelines
Government (e.g., Ministry of Health)
National medical or nursing associations
Peer review
Local NGOs
Community feedback
User survey or testing
Organization's internal quality assurance processes
Other [Please explain]

16. Who has reviewed your content? (Select all that apply.)
A global panel of experts [Please provide examples]
A national review board
One or more government ministries
User feedback
Other [Please explain]

17. In considering whether to share your content with mPowering, how important are the following? (Select from Not At All, Somewhat, Very Important for each option.)
Attribution
Licensing
Payment
User feedback
Access to data collected by the platform
Liability protection
Other (please specify)

18. What form of licensing, if any, does your organization use for its content?
Creative Commons [Which one?]
Other [Please explain]

19. **How frequently does your organization update its content?**
    Infrequently (less than once per year)
    Periodically (every 6–11 months)
    Frequently (every 1–5 months)

20. **Are there individuals other than you within your organization whom we should contact with further such requests?**
    No
    Yes (please specify)

21. **Is there one or more URLs where the mPowering team can go to learn more about the specific types of health content that your organization has available?**
    Yes [Please provide URL(s)]
    No
    Other [Please explain]

22. **What do you believe are being the biggest barriers to your organization sharing content?**

23. **What do you believe are the greatest incentives to your organization sharing content?**

24. **How does or might your organization like to be recognized for sharing content?**

25. **Can mPowering contact you at a later point to discuss your responses to this survey?**
    Yes
    No

26. **Is there anything else you would like to add?**
    Thank you very much for your time and attention in completing this survey.

27. **Would you like to receive a summary of the results from this survey? If so, please enter your email address below.**

Annex 2: Copy of Cover Emails (Original, First, and Second Reminders)

A. Original email (personalized):

Subject line: Happy Thanksgiving [first name]! mPoweringHealth survey - pls take a few minutes to respond

Dear [first name],

I'm inviting you to take a short survey about health content for mPowering Frontline Health Workers**.** **Please respond by Friday, December 6, 2013**. The survey should only take 5 to 10 minutes of your time.

Please go to: https://www.surveymonkey.com/s/mPoweringHealth

We are seeking to identify health content that [organization name] has on maternal, child and newborn health, including family planning / reproductive health, nutrition, and water, sanitation and hygiene for health workers or supervisors of health workers.

As you may know, mPoweringHealth.org will be building an online platform which will be both a portal to and repository of digital health content (e.g., SMS, IVR, video, audio, images, animation) to facilitate the sharing of high-quality digital health content with frontline health workers via mobile devices. We will do this by working closely with organizations already providing content, training and other support to these frontline health workers. Our vision is that content on this platform can be downloaded and integrated into technology applications by mobile operators, NGOs, social enterprises, health training institutions and governments to improve the effectiveness of hundreds of thousands of health workers around the world.

For more about mPowering Frontline Health Workers, please visit our website: www.mPoweringHealth.org.

The first step is to build a picture of what health content already exists, including the type of content and its accessibility. **That's where you come in!** As a member of an organization known to play a key role in educating and training health workers, we value your input.

You will be able to request a summary of survey results during the survey.

We believe that by aggregating high-quality digital health content and adapting it as needed for delivery over a variety of mobile platforms, we can better support frontline health workers. Access to mobile content can help these health workers feel more confident in providing effective care to their communities. In addition, access to refresher training and job aids such as decision trees can significantly increase health workers' effectiveness, thereby improving health outcomes among individuals who rely on them for care.

We hope that you will take the time **NOW** to take this short survey and we thank you in advance for your participation. Your input is invaluable! Please respond by **Friday, December 6.** Thanks!

Survey: https://www.surveymonkey.com/s/mPoweringHealth

Best regards,

Laura Raney
Marketing Communications Consultant

mPowering Frontline Health Workers
mPoweringHealth.org

mPowering Frontline Health Workers is an innovative public-private partnership designed to improve child health by accelerating the use of mobile technology by millions of health workers around the world. Our goal is to strengthen the capacity of frontline health workers and expand the coverage of critical maternal and child health interventions such as antenatal services, prevention of mother-to-child transmission of HIV, essential newborn care, pneumonia treatment and immunization.

B. First reminder

Changed subject line to: Request for help: mHealth Survey. Please spend a few minutes completing an online survey

C. Second reminder (shorter email)

Subject line: Request for help: Short mHealth Online Survey

Dear [first name],

I'm inviting you to take a short survey about health content for mPowering Frontline Health Workers**. Please respond by Friday, December 6, 2013**. The survey should only take 5 to 10 minutes of your time.

Please go to: https://www.surveymonkey.com/s/mPoweringHealth

We are seeking to identify health content that your organization has on maternal, child and newborn health, including family planning / reproductive health, nutrition, and water, sanitation and hygiene for health workers or supervisors of health workers. As a member of an organization known to play a key role in educating and training health workers, we value your input.

As you may know, mPoweringHealth.org will be building an online platform which will be both a portal to and repository of digital health content (e.g., SMS, IVR, video, audio, images, animation) to facilitate the sharing of high-quality digital health content with frontline health workers via mobile devices. We will do this by working closely with organizations already providing content, training and other support to these frontline health workers. Our vision is that content on this platform can be downloaded and integrated into technology applications by mobile operators, NGOs, social enterprises, health training institutions and governments to improve the effectiveness of hundreds of thousands of health workers around the world.

For more about mPowering Frontline Health Workers, please visit our website: www.mPoweringHealth.org.

You will be able to request a summary of survey results during the survey.

We hope that you will take the time **NOW** to take this short survey and we thank you in advance for your participation. Your input is invaluable!

Survey: https://www.surveymonkey.com/s/mPoweringHealth

Best regards,

Laura Raney
Marketing Communications Consultant

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mPowering Frontline Health Workers is an innovative public-private partnership designed to improve child health by accelerating the use of mobile technology by millions of health workers around the world. Our goal is to strengthen the capacity of frontline health workers and expand the coverage of critical maternal and child health interventions such as antenatal services, prevention of mother-to-child transmission of HIV, essential newborn care, pneumonia treatment and immunization.

Annex 3: List of Organizations Contacted

1	ADRA
2	Aga Khan Development Network
3	Aga Khan Health Services
4	The Aga Khan University, Pakistan
5	AMREF
6	Association of Reproductive Health Professionals (ARHP)
7	Averting Maternal Death and Disability (AMDD), Columbia University, Mailman School of Public Health
8	Berkeley Alliance for Global Health
9	Berkeley School of Public Health
10	Bixby Center for Population, Health & Sustainability
11	Blum Center for Developing Economies
12	Bonadea mHealth Solutions Private Limited (BMSPL)
13	CARE (India)
14	Carolina Global Breastfeeding Institute (CGBI)
15	Center for Global Health and Economic Development, Columbia University
16	Chemonics International
17	Children International
18	Clinton Health Access Initiative
19	CORE Group
20	DAI
21	Digital Campus
22	Dimagi
23	D-tree International
24	Duke Center for Child and Family Policy
25	Duke Global Health Institute
26	Duke-National University of Singapore
27	Duke University Global Women's Health Technologies Center
28	Education Development Center (EDC)
29	Elizabeth Glaser Pediatric AIDS Foundation
30	EngenderHealth
31	Family Care International
32	FHI 360
33	FHI 360/WASHplus
34	Freedom from Hunger
35	Future Generations
36	George Washington University School of Public Health and Health Services (GWU SPHHS)
37	Global Health and Development, Center for Research

38	Global Health Bridge
39	Global Health Corps
40	Global Health Workforce Alliance
41	Grameen Foundation
42	GSMA
43	HAID Initiative
44	Harvard School of Public Health
45	Health4All Neerog Nidhee
46	Health Initiatives Group
47	Helen Keller International
48	Hesperian Health Guides
49	HNI
50	ICF International
51	Institute for International Medical Education
52	Institute for Reproductive Health (IRH) at Georgetown University
53	Inter-American Development Bank
54	International Medical Corps
55	IntraHealth International
56	IntraHealth International/Senegal
57	Jamkhed International
58	Jana
59	JBS International
60	Jhpiego
61	Johns Hopkins Bloomberg School of Public Health Center for Communication Programs (JHU-CCP)
62	Johns Hopkins Bloomberg School of Public Health Center for Communication Programs (JHU-CCP), K4Health Project
63	John Snow Inc.
64	John Snow Research & Training Institute
65	Khan Academy
66	Lutheran World Relief
67	Mainland Hospital Yaba
68	The Manoff Group
69	Maternity Neighborhood
70	MCHIP/ICF International
71	MCHIP/PATH
72	Medical Aid Films
73	Medical Knowledge Institute (MKI)
74	Medic Mobile
75	Medics Without Borders Health Systems

76	mHealth Alliance
77	mHealth Tanzania Public Private Partnership
78	MobileDiagnosis Onlus Association
79	The Mother and Child Health and Education Trust
80	NetHope
81	NLM
82	NYU College of Nursing Global
83	OER Africa
84	One Million Community Health Workers Campaign
85	OneWorld
86	Paiwastoon
87	Partners in Health
88	PATH
89	Pathfinder International
90	PCI Global
91	Peace Corps
92	People's Open Access Education Initiative
93	Plan USA
94	PMA 2020, The Bill and Melinda Gates Institute
95	Population Services International (PSI)
96	Purdue University/AMPATH
97	Results for Development Institute
98	RTI
99	Save the Children
100	Sight Savers
101	SPRING
102	Stanford University
103	Stanford University Center for Innovation in Global Health
104	Stanford University Innovations for Poverty Action
105	UNC Gillings School of Global Public Health
106	UNICEF
107	United Methodist Communications
108	University of California Center for Effective Global Action
109	University of Michigan Medical School
110	University of Michigan School of Nursing
111	University Research Co., LLC
112	We Care Solar
113	World Bank
114	World Health Partners
115	World Vision International

116	World Vision US

Annex 4: List of Responding Organizations

1	Association of Reproductive Health Professionals (ARHP)
2	Averting Maternal Death and Disability (AMDD), Columbia University, Mailman School of Public Health
3	Bonadea mHealth Solutions Private Limited (BMSPL)
4	CARE (India)
5	Children International
6	CORE Group
7	Digital Campus
8	Dimagi
9	D-tree International
10	Education Development Center (EDC)
11	EngenderHealth
12	Family Care International
13	FHI 360
14	FHI 360/Alive & Thrive*
15	FHI 360/FANTA*
16	FHI 360/WASHplus
17	Future Generations
18	George Washington University School of Public Health and Health Services (GWU SPHHS)
19	Grameen Foundation
20	GSMA
21	Harvard School of Public Health
22	Health4All Neerog Nidhee
23	Hesperian Health Guides
24	International Medical Corps
25	Institute for Reproductive Health (IRH) at Georgetown University
26	IntraHealth International
27	IntraHealth International/Senegal
28	JBS International
29	Jhpiego
30	Johns Hopkins Bloomberg School of Public Health Center for Communication Programs (JHU-CCP)
31	Johns Hopkins Bloomberg School of Public Health Center for Communication Programs (JHU CCP), K4Health Project
32	John Snow Inc.
33	Khan Academy
34	Mainland Hospital Yaba
35	The Manoff Group
36	Maternity Neighborhood

37	MCHIP/ICF International
38	MCHIP/PATH
39	Medical Aid Films
40	mHealth Alliance
41	mHealth Tanzania Public Private Partnership
42	The Mother and Child Health and Education Trust
43	NetHope
44	Partners in Health
45	Pathfinder International
46	Population Services International (PSI)
47	Purdue University/AMPATH
48	Sight Savers
49	SPRING
50	World Health Partners
51	World Vision International
52	World Vision US

* Note: Respondent contacted at the suggestion of another respondent.