

**Additional file 2:** Post-Abortion Care quality measures and indicators measured in AMoCo study

| Donabedian [1]     | Domains from WHO QoC framework for MNHC [2] |                               | Quality measures and corresponding indicators measured in AMoCo study                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Targets                                | Data source                                                                      |
|--------------------|---------------------------------------------|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|----------------------------------------------------------------------------------|
| 1-Structure/Inputs | Competent human resources                   |                               | <b>Adequate knowledge, attitudes &amp; practices of health professionals</b><br><i>Training &amp; positive attitudes in PAC</i><br>Percentage of doctors, medical officers, midwives/nurses and midwifery/nurse assistant who are providing post-abortion care and who <sup>a</sup> :<br>- have been trained in Post-Abortion Care<br>- agreed that access to post-abortion care is every woman's right<br><br><i>Correct knowledge in management of key complications</i><br>Percentage of doctors, medical officers, midwives/nurses who are providing post-abortion care and who <sup>a</sup> :<br>- knew the recommended misoprostol regimen to treat first trimester incomplete abortions<br>- knew the recommended antibiotic regimen to treat septic abortions<br>- reported using D&C (non-recommended inappropriate technology) when treating incomplete abortion by instrumental uterine evacuation | 100 %<br>100 %<br>100 %<br>100 %<br>0% | Knowledge, Attitude Practice Behavior survey – Health professionals <sup>a</sup> |
|                    | Essential physical resources                |                               | <b>Extended comprehensive post-abortion care signal functions</b><br><i>(Trained medical professionals on duty 24/7, infrastructure, Drugs, supplies &amp; services for PAC and for contraception available):</i><br>Percentage of the extended comprehensive post-abortion care signal functions (n=27) available in the facility (cf. table 2) [3, 4]                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 100 %                                  | Rapid Facility Assessment                                                        |
|                    | Functional referral systems                 |                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                        |                                                                                  |
| 2- Processes       | Provision of care                           | Coverage of key practices     | <b>Coverage of key practices</b><br>- <i>Uterine evacuation</i> : Percentage of women who received <ul style="list-style-type: none"> <li>• instrumental uterine evacuation</li> <li>• uterine evacuation by uterotonics</li> </ul> - <i>Key interventions for severe complications</i> : Percentage of women who received <ul style="list-style-type: none"> <li>• blood transfusion</li> <li>• IV fluids</li> <li>• Intensive Care Unit admission</li> <li>• hysterectomies</li> </ul> - <i>Pain management</i> : Percentage of women who received analgesics<br>- <i>Contraception uptake</i> : Percentage of women who received Contraception at discharge                                                                                                                                                                                                                                                | N/A                                    | Prospective Medical Record Review                                                |
|                    |                                             | Actionable information system | <b>Information system</b><br><i>Completeness of clinical medical records on key medical information:</i><br>Percentage of women with complete information in their medical records on key medical information: gestational age, vital signs, abdominal examination, cervix examination (proxy for gynecological exam), mental status and appearance at presentation & final diagnosis                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 100 %                                  |                                                                                  |

| Donabedian [1]                 | Domains from WHO QoC framework for MNHC [2] |                                                                           | Quality measures and corresponding indicators measured in AMoCo study                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Targets                                            | Data source                              |
|--------------------------------|---------------------------------------------|---------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|------------------------------------------|
| 2- Processes (to be continued) | Provision of care (to be continued)         | Evidence based practices for routine care and management of complications | <b>Application of post-abortion care evidence-based clinical guidelines (practices) [5]:</b><br><br><i>Appropriate (preventative or curative) treatment for</i><br>- Uterine evacuation: Percentage of women undergoing Dilatation & sharp Curettage when having an instrumental uterine evacuation (inappropriate)<br>- Hemorrhage: Percentage of women <ul style="list-style-type: none"> <li>receiving blood transfusion when indicated <sup>b</sup></li> <li>receiving blood transfusion when there is no reported indication <sup>b</sup> (inappropriate)</li> </ul> - Infections: Percentage of women <ul style="list-style-type: none"> <li>with septic abortion <sup>c</sup> receiving curative antibiotics</li> <li>receiving prophylactic antibiotics when having an instrumental/surgical intervention (instrumental uterine evacuation, hysterectomy, laparotomy, laparoscopy)</li> <li>receiving antibiotics when there is no reported indication <sup>d</sup> (inappropriate)</li> <li>with tetanus vaccination status assessed &amp; adequately managed</li> </ul> - Anemia: Percentage of women with anemia who were prescribed Iron/Folic acid at discharge<br>- Pain management: Percentage of women having instrumental uterine evacuation who received adequate anesthesia (para cervical block, spinal anesthesia, general anesthesia)<br><br><i>Contraception counselling:</i> Percentage of women having been counselled about contraception. | 0%<br><br>100%<br>0%<br>100%<br>100%<br>0%<br>100% | Prospective Medical Record Review        |
|                                |                                             |                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                    |                                          |
|                                | Experience of care                          |                                                                           | <b>Reported experience of post-abortion care:</b><br>Percentage of women who reported that <sup>e</sup>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                    | Quantitative patient survey <sup>e</sup> |
|                                |                                             | Effective communication                                                   | - they were given explanations regarding care (UCSF PCMC scale & WHO-MCS-A question)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 100%                                               |                                          |
|                                |                                             |                                                                           | - they were able to ask questions during treatment (UCSF PCMC scale & WHO-MCS-A question)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 100%                                               |                                          |
|                                |                                             | Respect and preservation of dignity                                       | - they were spoken to nicely (WHO-MCS-A question)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 100%                                               |                                          |
|                                |                                             |                                                                           | - they received pain medication (WHO-MCS-A question)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 100%                                               |                                          |
|                                |                                             |                                                                           | - their privacy was respected all the time during physical examinations (UCSF PCMC scale)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 100%                                               |                                          |
|                                | Emotional support                           |                                                                           | - they had very short or short waiting time to see a provider (UCSF PCMC scale)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 100%                                               |                                          |
|                                |                                             |                                                                           | - they were asked about their feelings (UCSF PCMC scale)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 100%                                               |                                          |
|                                |                                             |                                                                           | - they have been supported by doctors or nurses about their anxieties and fears (UCSF PCMC scale)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 100%                                               |                                          |

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|----------------|---------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|------------------------------------------|
| 3- Outcomes    | Person-centered outcomes                    | <i>Good overall quality of the post-abortion care provided as perceived by the patient:</i><br>Percentage of women who reported that staff provided <u>best care all the time</u> (UCSF PCMC scale) <sup>e</sup>                                                                                                                                                                      | 100%                  | Quantitative patient survey <sup>e</sup> |
|                | Abortion-related health outcomes            | <i>Low</i><br>- <i>Abortion-related Mortality Index</i> : number of deaths/number of severe maternal outcome (SMO = near-miss cases <sup>†</sup> and deaths)<br>- <i>Risk of Healthcare-related abortion near-miss<sup>†</sup></i> : number of women with Near-miss <sup>†</sup> happening $\geq 24$ h after presentation/total number of women presenting for abortion complications | The lower, the better | Prospective Medical Record Review        |

<sup>a</sup> Questions included in the KAP survey questionnaire among health professionals providing post-abortion care:

- Did your medical/clinical officer/midwifery/nursing school training include any content on post-abortion care? (yes/no)
- Access to post abortion care services is every woman's right (Agree/Neutral, Unsure/Disagree)
- According to the guidelines used in this health facility, how many micrograms of misoprostol are recommended to treat incomplete abortion in the 1st trimester with a first single oral dose?
  - o Correct answer: 600 micrograms
- According to the guidelines used in this health facility, what are the antibiotics to be given to treat septic abortion?
  - o Correct answer: Amoxicillin/Clavulanic acid or Amoxicillin + metronidazole or Amoxicillin/Clavulanic acid + Gentamycin
- Do you personally provide post-abortion care with Dilatation & Curettage at this facility? (yes/no)

<sup>b</sup> a woman who needed a transfusion is defined by (MSF guidelines 2019[5]) a woman with:

- Hb  $\leq 5$  g/dl, even if there are no signs of decompensation
- Hb  $> 5$  g/dl and  $< 7$  g/dl if there are signs of decompensation (lowest SBP  $\leq 90$  mm Hg & pulse  $\geq 100$  b/min) or sickle cell disease or severe malaria or serious bacterial infection or pre-existing heart disease.

<sup>c</sup> Septic abortions include uterine infections, generalized peritonitis or severe systemic infections with genital origin and exclude extra-genital infections (malaria, urinary infections, etc.)

<sup>d</sup> No indication of antibiotics includes: no documented infection, no instrumental/surgical procedure, no trauma/perforation (no evidence of cervix/vaginal mechanical injury at clinical examination, uterine perforation or other intra-abdominal perforation confirmed at laparotomy or at clinical examination), no notion of septic maneuver to induce abortion and no foreign body found in the vagina.

<sup>e</sup> Questions included in the quantitative survey questionnaire among women who stayed at least overnight with abortion complications:

- During your stay at this hospital, were you given explanations regarding your care and treatment? (yes/no)
- Were you able to ask questions during the examination and treatment? (yes/no)
- Were you spoken to nicely? (yes/no)
- Did you receive pain medications during your hospital stay? (yes/no)
- During physical examinations (when the doctor was looking at private parts of your body) were you covered up (or given privacy in such a way only the doctor and nurses examining you could see you)? (Never/A few times/Most of the time/All the time/ Not examined)
- How do you feel about the amount of time you waited (to see a healthcare provider)? Would you say it was: (Very short/Somewhat short/Somewhat long/Very long)
- Did the doctors and nurses at the facility talk to you about how you were feeling? (yes/no)
- Did the doctors, nurses or other staff at the facility support your anxieties and fears? (yes/no)

- Did you feel the doctors, nurses or other staff at the facility took the best care of you? (Never/A few times/Most of the time/All the time)

† Near- miss cases: women with organ dysfunction of either one or more of the following: cardiovascular, respiratory, renal, coagulation, hepatic, neurological or uterine dysfunction using WHO near-miss criteria[6, 7].

SMO: Severe Maternal Outcome = Near-miss cases + Deaths

QoC: Quality of Care

WHO-MCS-A: World Health Organization Multi-Countries Study on Abortion[8]

UCSF PCMC scale: Person-Centered Maternity Care scale (University of California San Francisco)[9]

## References:

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