Maternity nursing care model in disaster

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Kondisi Bencana

Disaster

- Situation where the normal means of support and dignity for people have failed as a result of natural or manmade catastrophe" (WHO, 2002)
- UNDP (2004) defines “Disaster is a serious disruption triggered by a hazard, causing human, material, economic or (and) environmental losses, which exceed the ability of those affected to cope.”
- A disaster may have the following main features: Unpredictability,Unfamiliarity, Speed, Urgency, Uncertainty, Threat

Disaster Nursing

- Disaster nursing involves a systematic application of knowledge and skills specific to disaster situations as well as implementation of activities that minimize health hazards and life threatening damage caused by disasters (Gebbie & Qureshi, 2002; Veenema, 2003).
- The work of disaster nursing is performed in collaboration with many other specialized disciplines, yet concepts fundamental to all of nursing practice assist with disaster preparedness and response and include a focus on prevention, treatment, caring, advocacy, and education (Cox & Briggs, 2004).

Goals of disaster nursing

- To meet the immediate basic survival needs of populations affected by disasters (water, food, shelter, and security).
- To identify the potential for a secondary disaster.
- To appraise both risks and resources in the environment.
- To correct inequalities in access to health care or appropriate resources.
- To empower survivors to participate in and advocate for their own health and well-being.
- To respect cultural, lingual, and religious diversity in individuals and families and to apply this principle in all health promotion activities.
- To promote the highest achievable quality of life for survivors.

Roles of nursing

- Determine magnitude of the event
- Define health needs of the affected groups
- Establish priorities and objectives
- Identify actual and potential public health problems
- Determine resources needed to respond to the needs identified
- Collaborate with other professional disciplines, governmental and non-governmental agencies
- Maintain a unified chain of command
- Communication

Health effects of disasters

- Disasters may cause premature deaths, illnesses, and injuries in the affected community, generally exceeding the capacity of the local health care system.
- Disasters may destroy the local health care infrastructure, which will therefore be unable to respond to the emergency. Disruption of routine health care services and prevention initiatives may lead to long-term consequences in health outcomes in terms of increased morbidity and mortality.
- Disasters may create environmental imbalances, increasing the risk of communicable diseases and environmental hazards.
- Disasters may affect the psychological, emotional, and social well-being of the population in the affected community. Depending on the specific nature of the disaster, responses may range from fear, anxiety, and depression to widespread panic and terror.
- Disasters may cause shortages of food and cause severe nutritional deficiencies.
- Disasters may cause large population movements (refugees) creating a burden on other health care systems and communities. Displaced populations and their host communities are at increased risk for communicable diseases and the health consequences of crowded living conditions.

Emotional Response

1. ***Denial***
2. ***Strong Emotional Response***
3. ***Acceptance***
4. ***Recovery***

DISASTER MANAGEMENT CYCLE

A Model for Military Disaster Nursing

Military triage is founded on the principle of providing the greatest amount of good for the greatest number of people within the confines of limited resources.

Disaster Phase 1: Preparedness/Readiness

Disaster Phase 2: Response/Implementation

Disaster phase 3:Recovery/Reconstruction/Evaluation

Disaster Phase 1: Preparedness/Readiness

As pre-disaster, or pre-impact, and focuses on prevention, protection, and preparedness.

Produced as a result of examining the pre-impact, prevention, and preparation phase, before disaster strikes.

Components of readiness that include

- (a) personal, psychological, and physical readiness,
- (b) clinical nursing competency,
- (c) operational competency,
- (d) soldier/survival skills,
- (e) leadership and administrative support, and
- (f) group integration and identification.

Disaster Phase 2: Response/Implementation

Triage and emergency care of patients become the primary responsibility of medical and health care providers.

Safe shelter, food, and water are provided to those who experience the loss of their homes.

Reestablishment of communication and transportation routes, sanitation and waste removal, and protection against further serious injuries and diseases become essential.

The importance of verifying all communications and reports cannot be emphasized enough. Rumors spread like wildfire during the intense stress of the emergency

Disaster Phase 3: Recovery/Reconstruction/Evaluation

Concern for recovery of the community and its citizens, and recovery of staff who responded as caregivers and rescue workers.

During the third phase, the long-term, long-lasting effects of the disaster become a reality and people experiencing the disaster must now face lifelong losses and lifestyle changes that are permanent features in their lives.

Figure. Military disaster nursing model: Priority actions according to disaster phase

Phase 1: Pre-Disaster/Pre-Impact Preparedness/Readiness	Phase 2: Disaster/Impact Response/Implementation	Phase 3: Post-Disaster/Post-Impact Recovery/Reconstruction/Evaluation
Three-tiered preparedness/readiness training: **1. Individual readiness training** **- Physical fitness training** **- Emotional expectations and familiarization with disaster response** **- Soldier skills training** **- Family support and preparedness** **2. Clinical skills training** **- Trauma training, triage, evacuation** **- Procedures** **- Clinical assessment; use of equipment** **3. Unit/collective training** **- Operational competency** **- Mission knowledge** **- Leadership and administration skills** **- Unit integration and identification** **Development of disaster/mass casualty response plans outlining activities found in Phase 2 and preparation for their eventual implementation; plans updated and practiced regularly.**	Institute communications (field phones, individual portable radios, assign runners) Establish casualty receiving area/triage Assign stretcher bearers Design and communicate patient movement and flow throughout facility Establish triage sorting areas and sort casualties into specific, geographical areas throughout facility according to triage category and evacuation priority Post security guards at every entrance and exit to keep unauthorized personnel from entering facility Enactment of assigned staff roles	Care provided to indigenous population until evacuation to community hospitals in-country Recovery and restocking of supplies Reconstruction and repair of facility and equipment Evaluation and redevelopment of disaster/mass casualty plan Critical incident staff debriefings Recognition and reward of positive staff response Corrective action taken for negative response

The American College of Obstetricians and Gynecologists (ACOG) makes the following recommendations

- Hospitals that provide maternity services should implement a standing perinatal subcommittee (likely to include obstetrics, pediatrics, and anesthesia) in charge of disaster preparedness, which can be mobilized quickly in the event of an emergency.
- All hospitals should be familiar with the ACOG and Society for Maternal–Fetal Medicine (SMFM) levels of maternal care designations and should have integrated regional referral networks based on these levels.
- Hospitals with maternity services should develop specific strategies for stabilizing and transporting obstetric patients, managing surge capacity and the need for consultative services, sheltering-in-place, and incorporating regional facilities that do not provide maternity services.
- Hospitals providing care for maternal and neonatal patients should communicate using a common terminology, such as OB-TRAIN (Obstetric Triage by Resource Allocation for Inpatient), to facilitate and prioritize transport based on acuity of care.

ACOG Recomendation

- Disaster preparedness may include a designated obstetric team that can be called upon in an emergency setting or implemented as part of a planned evacuation.
- Communication strategies should include back-up broadcast systems—in the event of loss of telephone communication—that take advantage of new technology, such as telemedicine, that can function over the internet and still may be accessible when other lines of communication have been cut off.
- Obstetric units should have a designated safe location for laboring patients who cannot be transported because of imminent delivery. This plan should include an identified alternative site for delivery if the labor and delivery unit is damaged and a system to ensure the necessary equipment can be transported quickly to the alternative site.
- Ensuring that the woman and her infant are transported together is a vital element of disaster planning. This situation may require additional coordination in the event that the woman or her infant needs care at a specialized facility and may be initially transported separately.

ACOG Recomendation

- Hospitals should prepare for power outages and lack of access to electronic medical records. This scenario may include providing hard copies of the medical record at the time of patient transport or using mobile devices that can access a patient's medical record through online patient portals.
- Obstetricians and other obstetric care providers should consider the option of altering obstetric services to function with less resource use. Examples include early hospital discharge after delivery and enhanced use of telephone and telemedicine triage, with attention to documentation requirements.

Box 2. Additional Obstetric-Specific Considerations and Recommendations for Disaster Preparedness

- Appoint an obstetrician to direct disaster planning for maternity services.
  - Pediatrician involvement (or pediatric codirector) recommended.
  - Maternity and pediatric nursing involvement also recommended.
- Consider regional patterns of obstetric care provision and disaster scenarios.
- Consider obstetric and neonatal needs with high obstetric patient surge.
- Establish policies for visitation and lactation that balance infection control concerns with patient and familial desires for involvement in the birthing process.
- Foster functional working relationships with local and regional critical care clinicians.
- Have a working algorithm for ethical resource allocation when demand exceeds supply that considers obstetric- and pediatric-specific needs.
- Develop a surge capacity plan, realizing the challenges that pregnancy poses, to control patient volume.
- Consider temporary alterations to usual standards of obstetric care and mechanisms to optimize obstetric services with limited resources. Examples include but are not limited to the following:
  - Early hospital discharge after delivery.
  - Enhanced telephone and telemedicine triage, with attention to documentation requirements.
  - Rapid credentialing of health care providers to enable delivery of obstetric care in the event of work force limitations.

Level maternal care

- For an integrated, regionalized network to identify when transfer of patients may be necessary to provide risk-appropriate maternal care
- Collaborative network also could facilitate the management of surge capacity during a disaster. The established relationships and enhanced lines of communication would enable the rapid and creative response required in unexpected disasters. In such circumstances, a level III or level IV center may be forced to stop accepting new patients or create additional capacity for critical patients by transporting or directing those requiring less specialized care to lower-level centers.

Level maternal care

- Birth center:
  - Peripartum care of low-risk women with uncomplicated singleton term pregnancies with a vertex presentation who are expected to have an uncomplicated birth
- Level 1 (Basic care):
  - Care of uncomplicated pregnancies with the ability to detect, stabilize, and initiate management of unanticipated maternal–fetal or neonatal problems that occur during the antepartum, intrapartum, or postpartum period until patient can be transferred to a facility at which specialty maternal care is available
- Level II (specialty care):
  - Level I facility plus care of appropriate high-risk antepartum, intrapartum, or postpartum conditions, both directly admitted and transferred from another facility
- Level III (subspecialty care):
  - Level II facility plus care of more complex maternal medical conditions, obstetric complications, and fetal conditions
- **Level IV (Regional Perinatal Health Care Centers):**
  - Level III facility plus on-site medical and surgical care of the most complex maternal conditions and critically ill pregnant women and fetuses throughout antepartum, intrapartum, and postpartum care

Table 1. The "Obstetric Triage by Resource Allocation for Inpatient"* Model

Transport	Car (Discharge), Blue	Basic Life Support (Ambulance), Green	Advanced Life Support (Ambulance), Yellow	Specialized,† Red
Labor status	None	Early	Active	At risk for en route delivery
Mobility	Ambulatory‡	Ambulatory or nonambulatory	Nonambulatory	Nonambulatory
Epidural status	None	Placement greater than 1 h§	Placement less than 1 h§	Not applicable
Maternal or fetal risk	Low	Low or moderate	Moderate or high	High

*OB TRAIN, Obstetric Triage by Resource Allocation for Inpatient

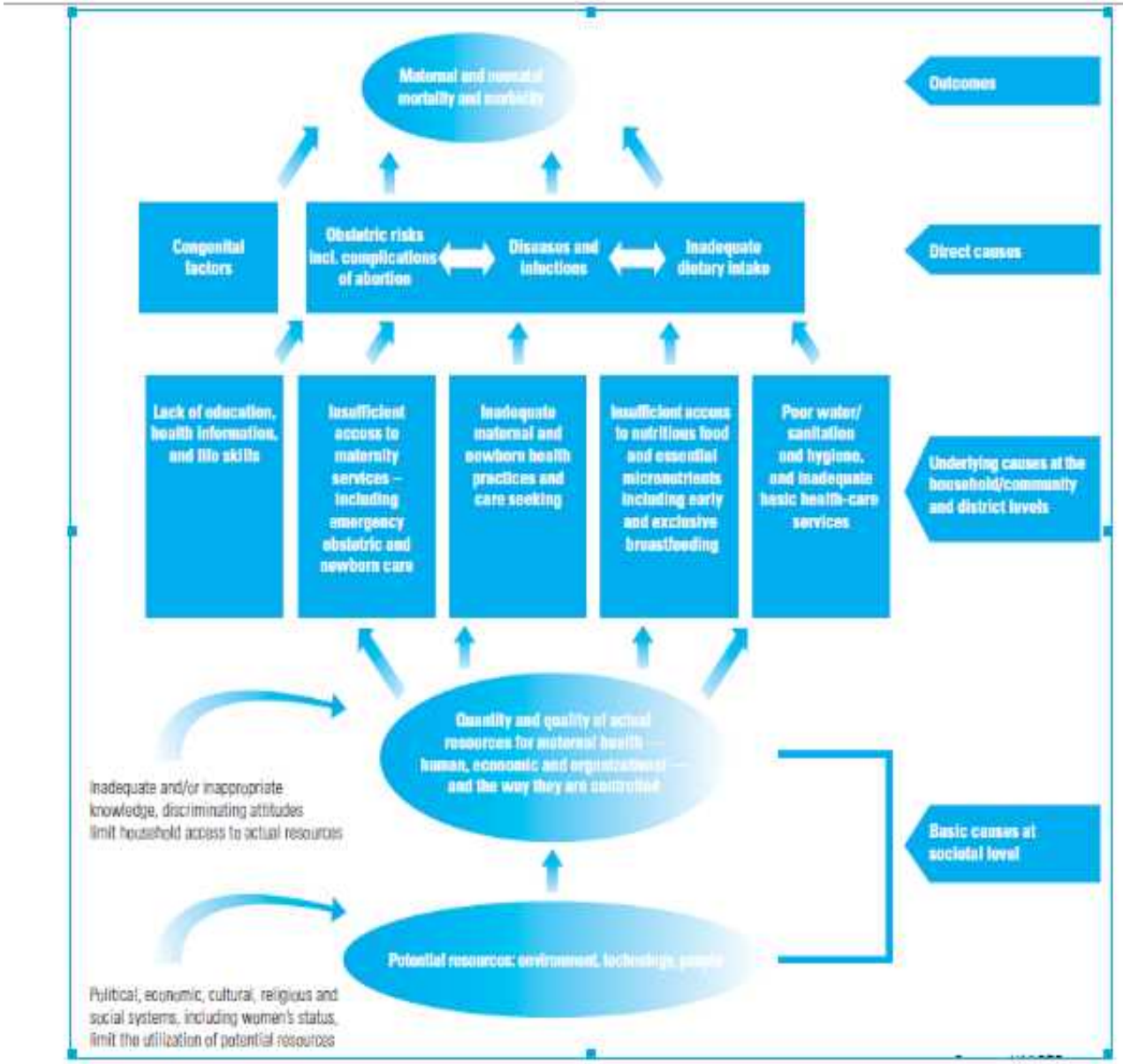
†Must be accompanied by physician or transport registered nurse

‡Modified Bromage scale 6=patient is able to perform a partial knee bend from standing

§Epidural catheter capped off

Reprinted from Daniels K, Oakeson AM, Hilton G. Steps toward a national disaster plan for obstetrics. Obstet Gynecol 2014;124:154–8.

Conceptual framework for maternal and newborn mortality and morbidity (UNICEF 2009)



Perlu memperhatikan hak asasi manusia dalam situasi bencana

- Hak untuk hidup
- Hak atas keamanan seseorang
- Hak memutuskan jumlah, jarak dan waktu memiliki anak
- Hak atas non diskriminasi dan kesetaraan
- Hak aas privasi
- Hak atas kesehatan
- Hak untuk mencari, menerima dan menyampaikan informasi
- Hak untuk bebas dari perlakuan kejam, merendahkan dan tidak manusiawi
- Hak atas bantun
- Hak atas manfaat kemajuan ilmiah

=== kesehatan reproduksi ===

Pelayanan berorientasi kesehatan reproduksi pada situasi bencana

- Mencegah dan menangani kekerasan seksual
- Mengurangi penularan HIV
- Mencegah meningkatnya kesakitan dan kematian maternal dan neonatal
- Perencanaan layanan kesehatan reproduksi yang komprehensif dan terintegrasi dalam pelayanan kesehatan

Dampak bencana

- PERUBAHAN ARTI HIDUP (MEANING IN LIFE)

Sumber Arti kehidupan

Orang lain yang signifikan: keluarga, teman, binatang peliharaan
Pengalaman dengan perbedaan pandangan
Terlibat dalam aktivitas produktif, sosial dan seni seperti aktivitas volunteer
Keterlibatan dalam aktivitas yang melibatkan emosi: hobby
Penderitaan akibat kematian anggota keluarga
Aktivitas spiritual dan religius

Komponen Meaning in Life

- Focusing on self
- Connecting to others
- Receiving from others
- A reciprocal relationship with others
- Contributing to others
- Connecting to beyond others
- A sense of direction
- A sense of purpose

Intervensi untuk meningkatan MIL

- Creating a healing environment
- Infiting reflecting on suffering
- Connecting suffering and spirituality
- Support group
- Art and music therapy
- Outings and special social activities

Studi impact of disaster on women

- **Impact of coping styles on post-traumatic stress disorder and depressive symptoms among pregnant women exposed to Hurricane Katrina**
  - Use of a humor coping style seemed to reduce the effect of perceived stress on depressive symptoms
  - Coping styles are potential moderators of the effects of stress on mental health of pregnant women.
- **Childbearing during disaster**
  - The core category was “disruption of life during pregnancy,” and four additional subcategories were “destruction of normalcy,” “uncertainty,” “loss of expectations,” and “coping with disruption.”
  - The women relied on family and friends for support. Life in New Orleans for months after the storm was difficult due to unreliable information. Healthcare professionals that interact with pregnant women should move toward use of electronic medical records and educate women about coping with stress during pregnancy.