EVIDENCE SEARCH REPORT

RESEARCH QUESTION:
What is the evidence for early implementation of field hospitals for COVID-19?

UNIQUE IDENTIFIER:
EOC040203-01 ESR

RESOURCES USED:
- PubMed
- CDC website & database
- medRxiv
- Embase
- MEDLINE
- CINAHL
- Disaster Medicine and Public Health Preparedness journal
- Google
- Google Scholar
- References or citing articles
- Librarian listservs

LIMITS/EXCLUSIONS/INCLUSIONS:
English

DATE:
April 4, 2020

LIBRARIAN:
Michelle Dalidowicz, Mark Mueller

REQUESTOR:
Dr. Gary Groot

TEAM:
Epidemiology and Modeling

SEARCH ALERTS CREATED:
NO

CITE AS:

LIBRARIAN NOTES/COMMENTS

Hi Gary,

There is some literature on field hospitals in this pandemic, but not a ton. I couldn’t find exactly what you were looking for but did look for literature on field hospitals and COVID-19 or SARS/MERS. One of the articles does discuss the impact on mortality. There are lots of news articles on these. I included only a couple as an example of what is available. I can do more searching if needed.

I did not expand to field hospitals in the context of other infectious diseases. If there are other diseases that you would like me to include please let me know. I also included a couple more generic resources about field hospitals just in case.

Thanks,
Michelle

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- All requests are kept confidential.
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SEARCH RESULTS

To obtain the full-text articles or to request offsite access, email library@saskhealthauthority.ca.

SUMMARIES, GUIDELINES & OTHER RESOURCES

Journal pre-prints or Google Scholar

Fangcang shelter hospitals: a novel concept for responding to public health emergencies
https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(20)30744-3/fulltext

https://www.medrxiv.org/content/10.1101/2020.02.26.20028472v3
Full article: https://www.medrxiv.org/content/10.1101/2020.02.26.20028472v3.full.pdf


[NOTE: this is a letter to the editor that discusses all measures -doesn’t account the impact to any one factor]

New articles

Ontario, B.C., Quebec begin building makeshift hospitals in preparation for rise in COVID-19 patients

Canada preparing makeshift hospitals to house patients as COVID-19 pandemic stretches capacity

LHSC opening a field hospital to prepare for potential COVID-19 influx
https://www.lhsc.on.ca/about-lhsc/lhsc-opening-a-field-hospital-to-prepare-for-potential-covid-19-influx

Inside Wuhan’s ‘Fangcang’ Shelter Hospitals

Italy deploys emergency field hospitals to fight virus
https://www.bangkokpost.com/world/1872069/italy-deploys-emergency-field-hospitals-to-fight-virus

More general resources


WHO. Hospital emergency response checklist. An all-hazards tool for hospital administrators and emergency managers. http://www.euro.who.int/__data/assets/pdf_file/0020/148214/e95978.pdf?ua=1

ARTICLES FROM LIBRARY DATABASES

Note: References are sorted by year (newest to oldest)


Preparedness for the ongoing coronavirus disease 2019 (COVID-19) and its spread in India calls for setting up of adequately equipped and dedicated health facilities to manage sick patients while protecting healthcare workers and the environment. In the wake of other emerging dangerous pathogens in recent times, such as Ebola, Nipah and Zika, it is important that such facilities are kept ready during the inter-epidemic period for training of health professionals and for managing cases of multi-drug resistant and difficult-to-treat pathogens. While endemic potential of such critically ill patients is not yet known, the health system should have surge capacity for such critical care units and preferably each tertiary government hospital should have at least one such facility. This article describes elements of design of such unit (e.g., space, infection control, waste disposal, safety of healthcare workers, partners to be involved in design and plan) which can be adapted to the context of either a new construction or makeshift construction on top of an existing structure. In view of a potential epidemic of COVID-19, specific requirements to handle it are also given.

http://www.ijmr.org.in/preprintarticle.asp?id=280781;type=0 [only seems to be the abstract available but some of my colleagues might be able to track down]


During the COVID-19 outbreak, China made great progress in controlling the epidemic, and the number of confirmed and suspected cases continues to decrease thanks to the various efforts employed. Mobile field hospitals have played a huge role in the centralized management of patients and they have effectively reduced transmission. This article describes some of our experiences operating mobile field hospitals in order to provide a reference and to better inform countries that are dealing with this crisis.

https://www.jstage.jst.go.jp/article/bst/advpub/0/advpub_2020.01110/_article

This article outlines the evolution of a rescue team in responding to adenovirus prevention with a deployable field hospital. The local governments mobilized a shelter hospital and a rescue team consisting of 59 members to assist with rescue and response efforts after an epidemic outbreak of adenovirus. We describe and evaluate the challenges of preparing for deployment, field hospital maintenance, treatment mode, and primary treatment methods. The field hospital established at the rescue scene consisted of a medical command vehicle, a computed tomography shelter, an X-ray shelter, a special laboratory shelter, an oxygen and electricity supply vehicle, and epidemic prevention and protection equipment. The rescue team comprised paramedics, physicians, X-ray technicians, respiratory therapists, and logistical personnel. In 22 days, more than 3000 patients with suspected adenovirus infection underwent initial examinations. All patients were properly treated, and no deaths occurred. After emergency measures were implemented, the spread of adenovirus was eventually controlled. An emergency involving infectious diseases in less-developed regions demands the rapid development of a field facility with specialized medical personnel when local hospital facilities are either unavailable or unusable. An appropriate and detailed prearranged action plan is important for infectious diseases prevention. (Disaster Med Public Health Preparedness. 2018;12:109-114).

#28260561


In November 2014, a total of 164 health care workers were dispatched by the Chinese government as the first medical assistance team to Liberia. The tasks of this team were to establish a China Ebola treatment unit (ETU), to commence the initial admission and treatment of suspected and confirmed Ebola patients, and to provide public health and infection control training for relevant local personnel. Overall, during the 2-month stay of this first medical assistance team in Liberia, 112 Ebola-suspected patients presented to the ETU, 65 patients were admitted, including 5 confirmed cases, and 3 confirmed cases were cured. Furthermore, 1520 local people were trained, including health care workers, military health care workers, staff members employed by the ETU, and community residents. Most importantly, as the first Chinese medical assistance team deployed to Liberia fighting the Ebola virus on the frontline, not a single member of this team or the hired local staff were infected by Ebola virus. This highly successful outcome was due to the meticulous infection control initiatives developed by the team, thereby making a significant contribution to China’s ETU "zero infection" of health workers in Liberia. The major infection control initiatives conducted in the China ETU that contributed to achieving "zero infection" of all health workers in the ETU are introduced in this report. (Disaster Med Public Health Preparedness. 2017;11:262-266).

#2766397

SEARCH STRATEGIES

PubMed Saturday, April 04 8:20 AM

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CINAHL Saturday, April 04, 2020 8:46:18 AM

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Database: Embase <1974 to 2020 April 03>
Search Strategy:
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1  field hospital/ (160)
2  (field hospital? or mobile health unit? or shelter hospital? or makeshift hospital? or clean facilit* or clean hospital? or mobile hospital?).mp. (1038)
3  1 or 2 (1038)
4  (coronavirus* or corona virus* or coronovirus* or coronaviral or (wuhan adj1 virus) or (wuhan adj1 viral) or cov or covid or WN-CoV or ncov or 2019ncov or ncov2019 or ncovid 2019 or ncov2019 or 2019ncovid or covid-19 or covid19 or covid 19 or HCoV-19 or HCoV-2019 or hcov19 or hcov2019 or Severe Acute Respiratory Syndrome Coronavirus 2 or Severe Acute Respiratory Syndrome Coronavirus 2 or SARS Coronavirus 2 or SARS Corona virus 2 or SARS-CoV-2 or SARSCOV2 or SARSCOV 2 or SARS2 or SARS-2 or coronavirus disease 2019 or coronavirus disease 2019).mp. (21987)
5  3 and 4 (1)

Search terms used in combination in other resources:
- Covid or coronavirus or SARS or MERS
- Field hospital or makeshift hospital or shelter hospital or clean hospital
- Huoshenshan OR Leishenshan OR Fangcang

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Google Scholar and Google
(covid-19 OR coronavirus) AND ("field hospital" OR "field hospitals" OR "shelter hospital" OR "shelter hospitals" OR "makeshift hospital" OR "makeshift hospitals")
(Huoshenshan OR Leishenshan OR Fangcang) AND (covid-19 OR coronavirus) AND (impact OR benefit)