



“Strengths in unity”:

A REAL TIME EVALUATION OF AN MSF COLLABORATIVE APPROACH TO A MENINGITIS OUTBREAK IN NIGER 2016

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SHORT VERSION

This publication was produced at the request of programme managers for Niger in OCB, OCBA, OCG and OCP. It was prepared independently by **ALYSON FROUD**

DISCLAIMER

The author's views expressed in this publication do not necessarily reflect the views of **Médecins Sans Frontières** or the **Stockholm Evaluation Unit**.

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Front Cover Photo by Juan Carlos Tomasi / MSF

Vaccination activities in Niger

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ACRONYMS

AS	Aire de Santé (Health area)
CSI	Centre de Santé Intégré (Health Centre)
DSRE	Direction de la Surveillance et la Riposte aux Epidemies (National surveillance and Epidemic response Directorate)
DRSP	Direction Regionale de la Sante Publique (Regional Health Authority)
MSF	Médecins Sans Frontières
HNN	Hôpital National de Niamey
ISIS	Islamic terrorist group
MSP	Ministere de Santé Publique (Ministry of Public Health)
MDO	Maladies à Déclaration Obligatoire (Notifiable Diseases)
CFR	Case Fatality Rate
CSE	Centre Surveillance Epidémiologique
CSF	Cerebrospinal Fluid
ICG	International Coordinating Group (vaccine provision for epidemic meningitis)
MnC	Meningitidis Neisseria Serogroup C
MnA	Meningitidis Neisseria Serogroup A
MnW	Meningitidis Neisseria Serogroup W
OCHA	Office for the Coordination of Humanitarian Affairs(UN)
EPREP	Emergency Preparedness
OCB	Operational Centre Brussels
OCBA	Operational Centre Barcelona
OCG	Operational Centre Geneva
OCP	Operational Centre Paris
SMC	Seasonal Malaria Chemo prophylaxis
SPIS	Service Programmation et d'Information Sanitaire
SNIS	Système Nationale d'Information Sanitaire
RDT	Rapid Diagnostic Test
RTE	Real Time Evaluation
RUTF	Ready to Use Therapeutic Food
UN	United Nations
WHO	World Health Organisation.

EXECUTIVE SUMMARY

This evaluation was commissioned by MSF OCB with the agreement and support of OCBA, OCP and OCG. The initial intention had been to undertake a post evaluation of the collective MSF response to a large Meningitis C epidemic in Niger in 2015. However, a number of factors combined to make the execution of a real time evaluation of MSF meningitis activities in Niger in 2016 more realistic.

2015 saw the first large scale Meningitis C outbreak in Africa since 1979. It was caused by a unique strain of *Neisseria Meningitidis C*. There had been a worldwide shortage of C containing vaccines in 2015 and this was expected to continue into 2016. As a result in 2015 little reactive vaccination had been carried out in the Nigerien population making them potentially vulnerable to meningitis in 2016 given that they had little conferred immunity.

The findings are based on two field visits to Niger, analysis of relevant documents (reports, records, emails), interviews with a cross section of key people involved in the meningitis response in 2015 and 2016 and participant observation of ongoing events in real time.

To use a more cohesive, collaborative approach was the ambition for 2016 from the different OCs and this was informally agreed at the end of 2015. Basically the 8 regions of Niger were divided between the four operational centres and it was agreed there would be collaboration and communication related to epidemiological data and laboratory activities. In addition, there would be one spokesperson who would represent MSF to all external actors – mainly the government and UN bodies. This position passed between three of the four HOM informally depending on their workload and other commitments.

Whilst geographical division made practical sense, there was a marked difference in the extent to which the different areas were affected and hence the different OCs were involved in meningitis activities. The comparatively low level of meningitis related activities this year hardly challenged the combined resources of the four MSF operational centres – for example OCP had minimal input as there were few cases in their regions of responsibility and the other sections all had manageable workloads.

The most obvious failing in regards to collaboration was the non sharing of EPREP stock amounts and vaccination cold chain capacity. Even treatment kits although similar, were not standardised across the sections. If regional backup support had been necessary (as was the case in 2015) standardisation is important to avoid confusion and a clear idea of available resources greatly assists emergency response.

The MSF weekly Meningitis Committee worked well in terms of bringing all OCs together with Epicentre and allowing for discussion and collaboration. Well written meeting minutes were shared promptly for amendment and approval. However the staff directly involved in managing the meningitis outbreak (emergency coordinators from OCB, OCBA and OCG) were not considered as committee members and attended infrequently and the medical coordinators sporadically often due to other commitments. A recommendation to add case management to the agenda that initially mainly focused on epidemiology and vaccination strategies was implemented between the first and the second field visit. The meningitis committee could have perhaps started earlier and been used as a forum during the preparatory phase to better harmonise the MSF approaches to the meningitis outbreak.

Epicentre was playing a significant role in coordinating and incorporating the epidemiological and laboratory data from MSF and public institutions and produced a weekly epidemiological bulletin.

The introduction of an inter-sectionally agreed line-list for medical data is a very positive achievement for MSF, meaning that this much larger set of data coming from all sections can be analysed. Unfortunately for this outbreak the approved line list arrived after data had already started to be collected by the different sections meaning it had to be re-entered into the new line list creating more work.

Laboratory results – that should help guide epidemic management – were still being shared very late with partners and MSF never formally received any results of the Pastorex tests undertaken in the regions even though MSF supplied the test kits. Ministry of Health systems set up to manage the transportation of CSF samples to the national reference laboratory were not respected by government employees and despite MSF offering to help this did not really improve.

Vaccination activities were generally informed by epidemiological data and the time limit for effective vaccination was generally respected MSF supported campaigns. Lack of reliable population data given at central level and the Ministry of Health decision to limit the security stock and waste factor combined to 10% meant that in most cases population figures were underestimated and the vaccine stock was not enough. Due to redefined and more sensitive alert and

epidemic thresholds proposed by WHO in 2014 (but officially available in 2015) epidemic “pockets” were identified at sub district level and vaccinated in an attempt to contain the number of cases.

It is not clear whether the vaccination strategy employed in 2016 to “extinguish” small epidemic “pockets” at sub district level had any real impact on the progress of the outbreak as there are potentially many other variables that could have affected the disease progression. Certainly the number of cases is very much reduced when compared to 2015.

At least two of the sections had Ceftriaxone injection in two different formats – IM and IM/IV with no clear written protocols on how these would be used differently in different contexts. Given that using the IM preparation mistakenly by the IV route could potentially be fatal and given the need for standardisation of activities during high volume episodes such as epidemics this is an important oversight.

The level of planning for the clinical management of both ambulatory and hospitalised cases varied by section but was generally sidelined in favour of vaccination activities. However, somewhat fortuitously the number of cases began to drop by week 10 so planning to effectively manage an increase in cases ceased to be a priority.

The MSF advocacy strategy in 2016 took into account the specific political context in country (ongoing national and presidential elections) but had the clear objective of keeping the meningitis (and measles) outbreaks as the central point of discussion with the Ministry of Health and other actors. Maintaining a positive, non overtly critical relationship with the Health Ministry and offering assistance and support where possible and necessary kept lines of communication open.

A number of recommendations were made following the first field evaluation visit that related directly to emergency preparedness and MSF resources. The following recommendations are addressed to all operational centres.

- ⇒ **Recommendation 1:** Where more than one MSF operating centre is responding to a medical emergency within a given country common EPREP planning and shared management of emergency stocks and resources should be the norm. This is the most efficient and effective use of MSF resources.
- ⇒ **Recommendation 2:** Careful consideration and clear written protocols that are contextually relevant are pre requisites to the use of **both** forms of parenteral Ceftriaxone (IM and IM/IV) given the real risk – particularly in epidemic/emergency situations- of inadvertently giving the IM preparation by the IV route with potentially fatal consequences.
- ⇒ **Recommendation 3:** When conducting mass vaccination campaigns during a meningitis epidemic a minimum security stock of vaccines (including the wastage component) should not fall below 25% even in times of global shortage and 100% vaccination coverage should be the objective.

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