

# **Preparedness and Management of Diarrhea Outbreak 2010**

Department of Health Services  
Epidemiology and Disease Control Division

# Background

- Every year outbreak of diarrhea occurs through out the country. E.g.
  - 3137 persons affected (37 deaths) in 2005
  - 3136 persons affected (23 deaths) in 2006
  - 33746 persons affected (247 deaths) in 2007 (cholera in Kalikot and Rautahat)
  - 6515 persons affected (38 deaths) in 2008
- Case fatality rate of about 1 % is usually observed
- Rapid response teams are mobilized during outbreak

# Categories of Outbreak Prone Districts

## Category A : High risk

Expected Frequency of Outbreaks: 1-3

- Sankhuwsava
- Khotang
- Saptari
- Udayapur
- Dhanusha
- Mahottari
- Sarlahi
- Parsa
- Bara
- Dolakha
- Myagdi
- Kapilvastu
- Nawalparasi
- Banke
- Humla
- Jumla
- Mugu
- Dolpa
- Kalikot
- Jajarkot
- Doti
- Baitadi
- Achham
- Rautahat
- Bajhang
- Bajura

26 Districts

# Category B (Medium Risk)

Expected Frequency of Outbreaks: 1-2

- Bhojpur
- Jhapa
- Siraha
- Okhaldhunga
- Rasuwa
- Nuwakot
- Chitwan
- Ramechhap
- Rukum
- Rolpa
- Sindhupalchok
- Dhading
- Makwanpur
- Kavre
- Sindhuli
- Gorkha
- Lamjung
- Arghakhachi
- Palpa
- Tanahu
- Syangja
- Taplejung
- Parbat
- Bardiya
- Surkhet
- Dailekh
- Salyan
- Pyuthan
- Dang
- Dadeldhura
- Kailali
- Panchthar
- Terhathum

(33 districts)

# Category C: Low risk

Expected Frequency of Outbreaks: 0-1

- Sunsari
- Morang
- Ilam
- Dhankuta
- Solukhumbu
- Kathmandu
- Bhaktapur
- Lalitpur
- Kaski
- Baglung
- Manag
- Mustang
- Rupandehi
- Kanchanpur
- Darchula
- Gulmi

**(16 districts)**

# An Experience of Diarrhea Outbreak Management 2009

- Diarrhea Outbreak was started in Jajarkot District in the 1<sup>st</sup> week of May 2009. After that
- Rukum, Dailekh, Surkhet, Dolpa, Rolpa, Salyan, Bajhang, Doti, Baitadi, Dadeldhura, Pyuthan, Dang, Achham, Kanchanpur, Kailali, Bajura, Sarlahi, Bara etc.
- At the start of July 2009 (Asar 2066), the outbreak was active again. (Total affected districts 23).
- Mostly Affected Districts were Jajarkot, Rukum and Dailekh
- Mobilized 501 HWs
- Total cases were 67000 and 371 death
- Medicines and Health workers were send by Army Helicopter.

# An Experience of Diarrhea Outbreak Management 2009

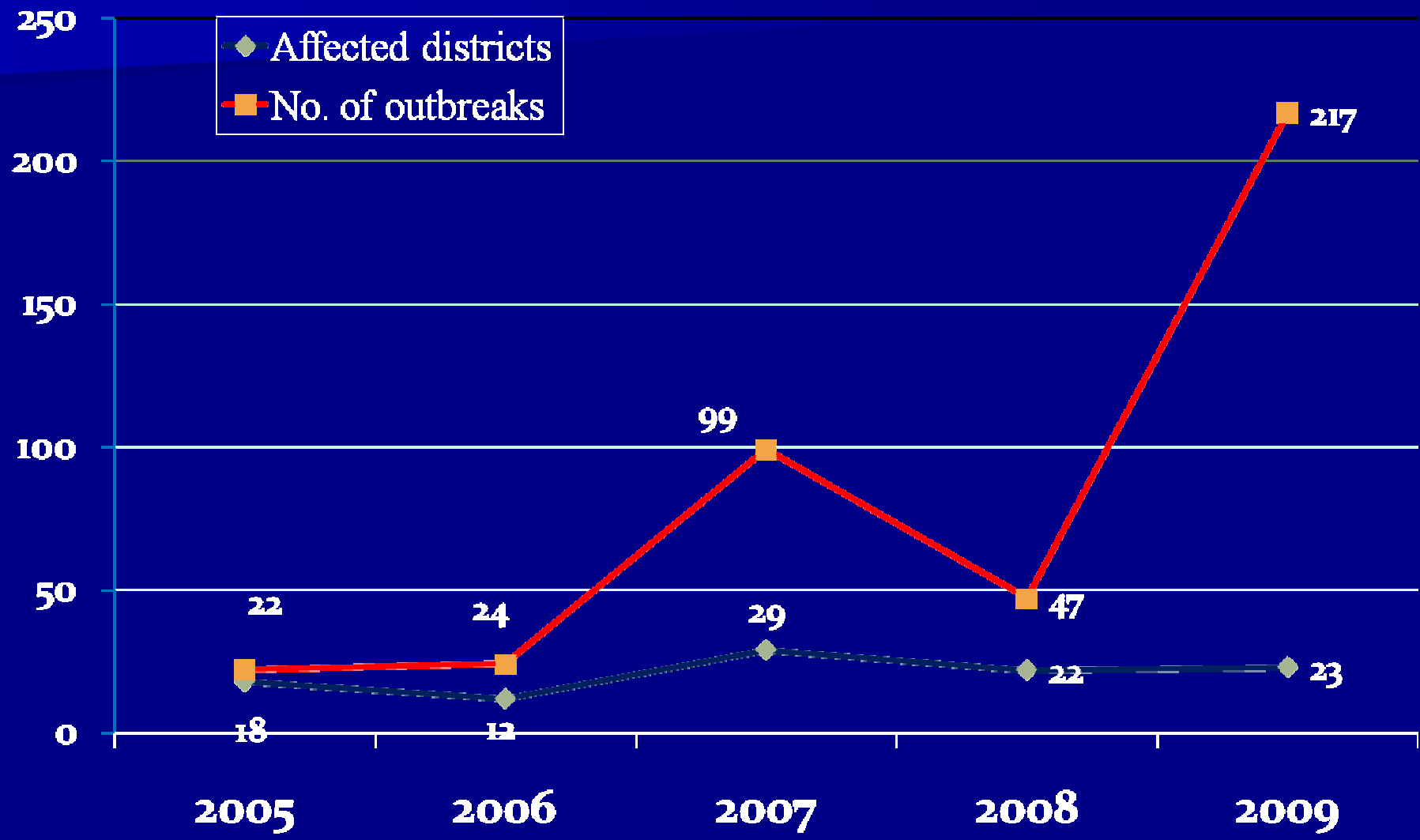
- Distribution mechanism of medicines in districts were not managed properly.
- Reporting mechanism was not done in time and not used line listing
- Coordination mechanism in districts was poor.
- The most cause of diarrheal outbreak was due to Vibrio Cholera
- The diarrhea outbreak was controlled in last of September.

# Organizations involved in Response

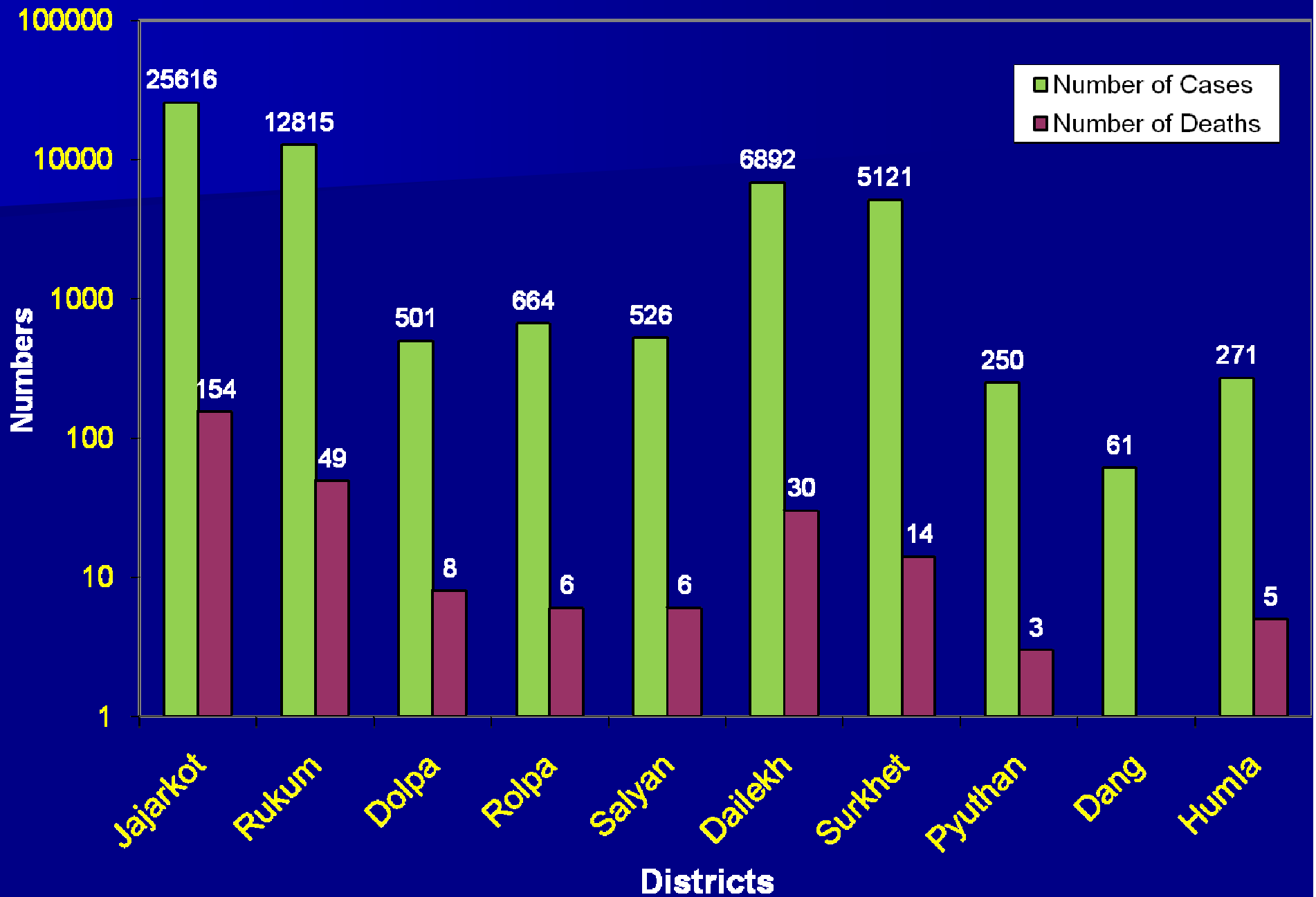
- Nepal Army
- Nepal Police
- Armed Police
- Nepal Medical Association
- HELBITAS Nepal
- Nepalgunj Medical College
- Nepal Health Research Council
- INF Nepal
- SMNF
- CWIN/SCF
- Water Aid
- AMDA
- CWIN/SCF
- CARE Nepal
- Concern worldwide Nepal
- TUTH
- NAMS
- Medicare Hospital
- Nepal Redcross
- Unicef
- WHO Nepal
- WHO/IPD
- WHO/SEARO
- Deprocs Nepal
- ADRA Nepal
- MSF Holland
- NEWAH
- Health workers from UNCPM
- Hill development
- ENPHO/Paschim paila
- Alka Hospital
- NRN
- National Medical College
- NCCI
- GRACE hospital



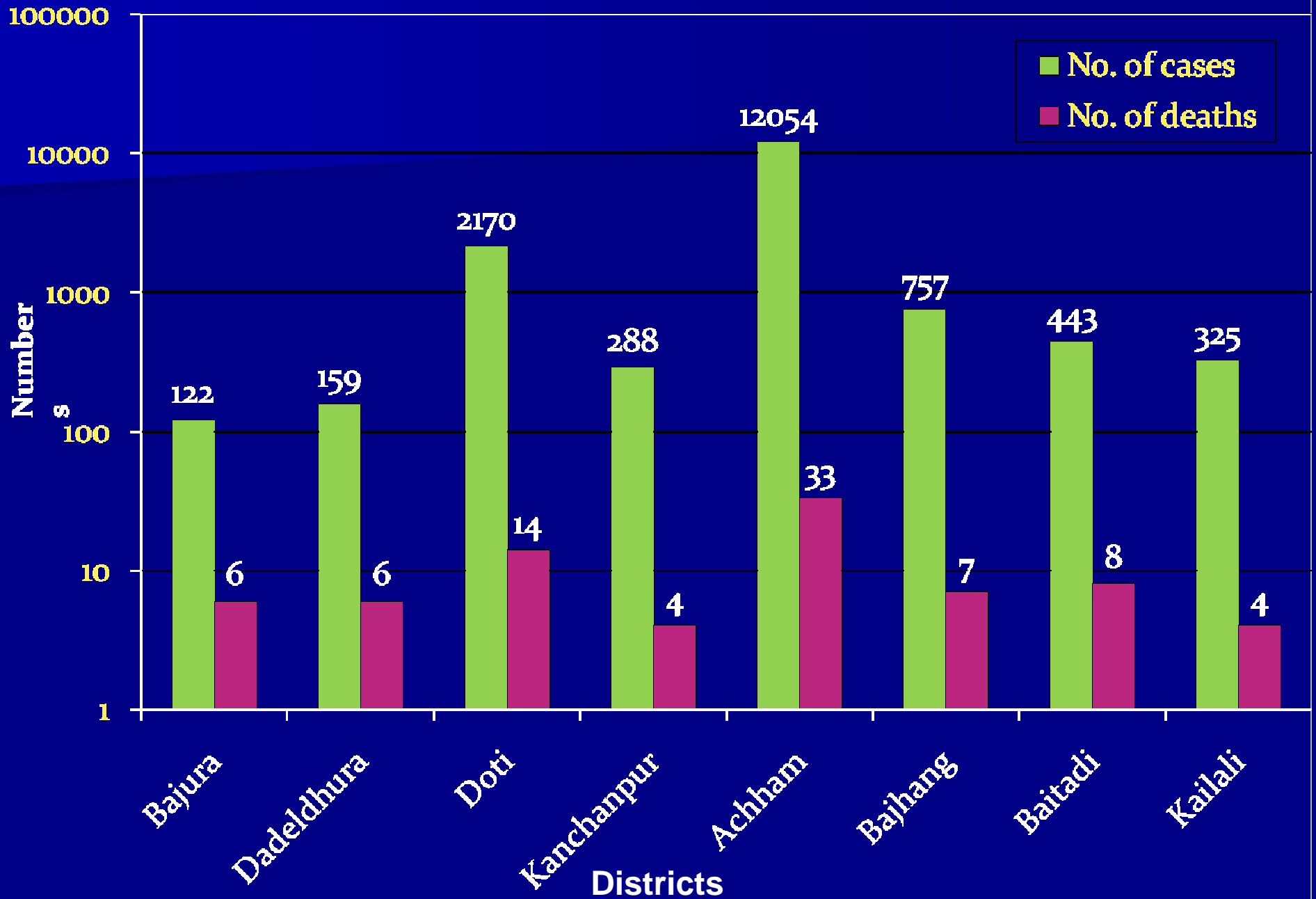
# Reported Outbreak of Diarrhoeal Diseases (2005-09)



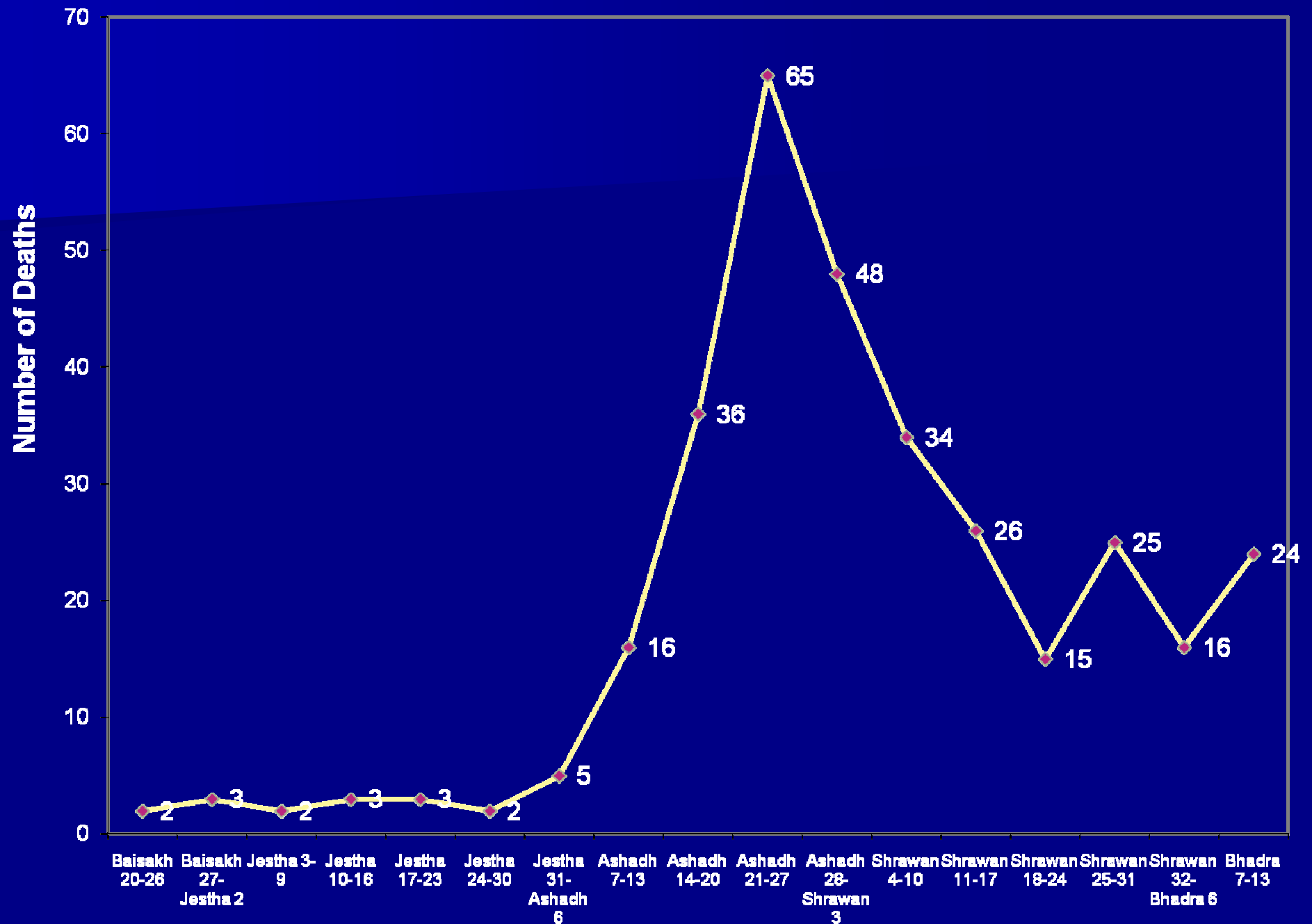
## District wise number of cases and deaths



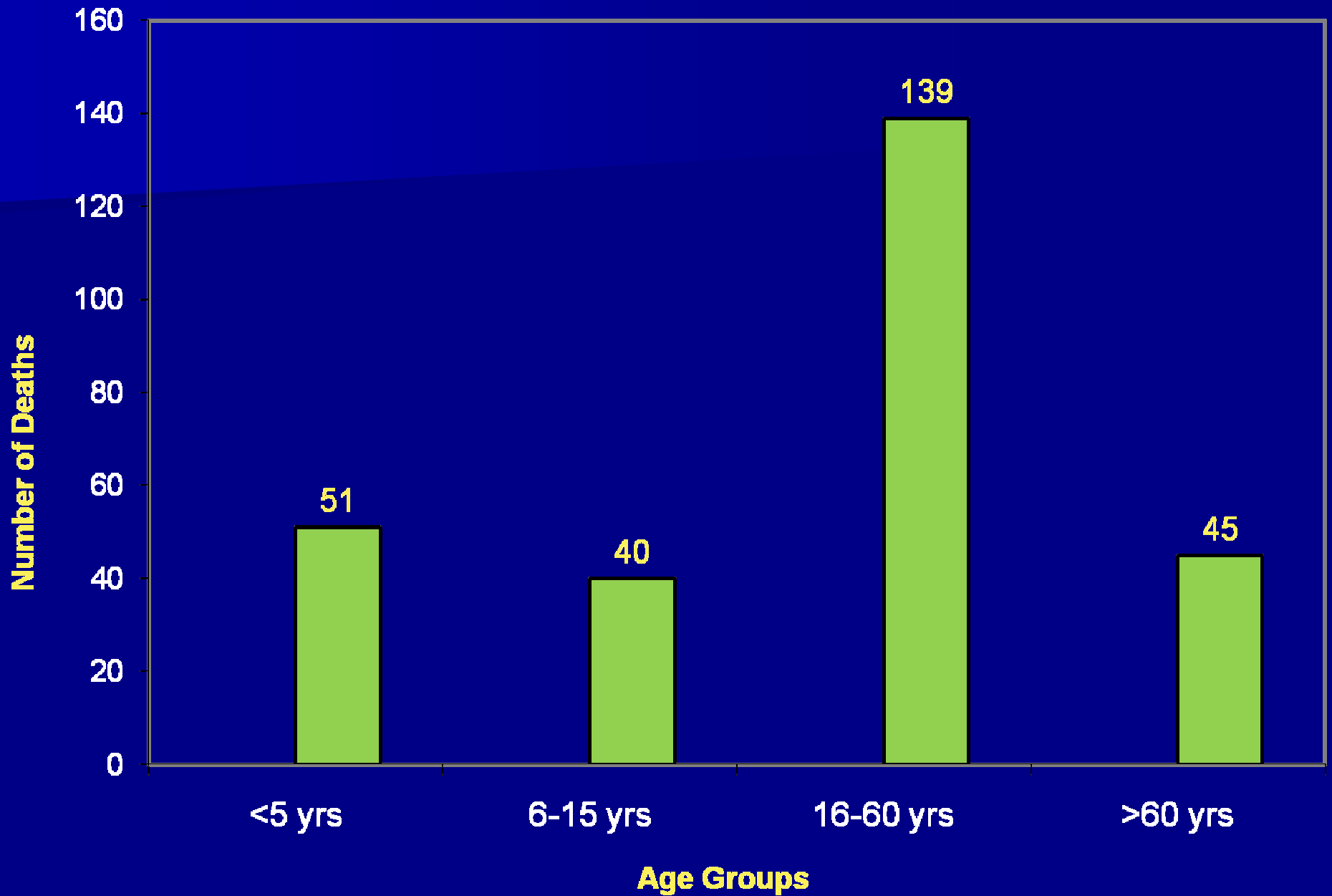
## District wise number of cases and deaths.....



## Trends of Diarrheal Deaths in Mid-Far Western Region



## Age wise distribution of Diarrheal Deaths of MWDR



# Problems and Challenges

- Started Diarrhea from Jajarkot district and managed by RRT but after mid Ashad affected many districts and VDCs of mid-western and far-western region and increased unexpected no of cases and deaths.
- Some vacant post of health workers in health institutions were not fulfilled and lacking of sufficient medicines.
- Coordination mechanisms with different stakeholders and media persons in districts, region and centers lacking .
- Not maintain one door mechanism for relief package and medicines to send in districts.

# Problems and Challenges

- Geographical and transportation difficulties to send team for investigation, health workers mobilization and medicines transportation in time.
- No effective awareness program regarding personnel and environmental hygiene and purification of drinking water.
- Local traditional practices and beliefs.

# Preparedness of Diarrhea Epidemics

- RRT in districts, Region and centers are in ready position to respond any outbreak.
- Districts were divided in 3 categories as most effected, effected and less effected districts and managed for medicines accordingly.
- Sending of medicines in Regional Medical Store for buffer stock because any districts may need more medicines during outbreak.
- To make early investigation test kit transfer media for cholera send in outbreak prone districts
- To make effective awareness in relation to outbreak more emphasis were given in different media channel and already started in districts.
- Every FCHV managed to give at least 10 packets of Jeevanjal.



# Preparedness of Diarrhea Epidemics

- Conducted 3 days orientation program on preparedness and management of outbreak to health workers in Rukum, Jajarkot, and Dailekh and also conducted Stake holders interaction program .
- CRRT formed in Jajarkot, Rukum and Dailekh for quick respond and management of outbreak and districts also decided to keep medicines for buffer stock in CRRT center.
- In every districts they formed District Outbreak Preparedness and Management Committee and they started work in Rukum, Dailekh and Jajarkot.
- On 2067-1-8 conducted one initial discussion with different organization and discussed on problem and strategy to control diarrhea outbreak in community.

# Current Situation Of Diarrhea outbreak

- Found 3 deaths in Majkot, Jugathapachaur and Khagenkot VDCs in Jajarkot District and no evidence of diarrhea outbreak
- 3 deaths in Rawatkot, Bisalla and Jagannath VDCs in Dailekh Districts. No diarrhea outbreak
- 2 deaths in kanda and jageda VDCs in Bajura Districts and no evidence of diarrhea outbreak.
- 1 death due to diarrhea in Belapur VDC of Dadheldhura districts and no outbreak
- 7 deaths were reported from Baitadi district in Gajari, Sigas, Sibling and Thalakanda VDCs.
- RRT mobilization in affected VDCS and strengthen of surveillance activities and varification of death is ongoing.
- 3 members team send from EDCD in Baitadi District

# Strategies

- Communicable disease outbreak preparedness and management committee in districts in which outbreak will be managed through multi-sectoral approach in a coordinated way
- Advised to construct 3-6 CRRT in Districts according to geographical situation hoping that outbreak will be managed and controlled at local level.
- In districts, Region and Centers should be managed medicines for Buffer Stock to control diarrhea outbreak and district will manage buffer stock for CRRT.
- Every district should construct a outbreak preparedness and management committee in which they can recognize outbreak and coordinate for management and control also they disseminate the correct information of outbreak in district.

# Strategies

- One group of FCHVs, NRCS, Teachers, Civil societies, and other Organizations in ward level better to mobilize to create awareness for safe drinking water and sanitation and use of ORS, (food based) at household level during outbreak and emphasis should given to visit in health institutions for treatment of diarrhea.

Thank You