



# 2017/18 Cholera Outbreak

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**NEPPC&MC**

02 January 2018

**Zambia National Public Health Institute**

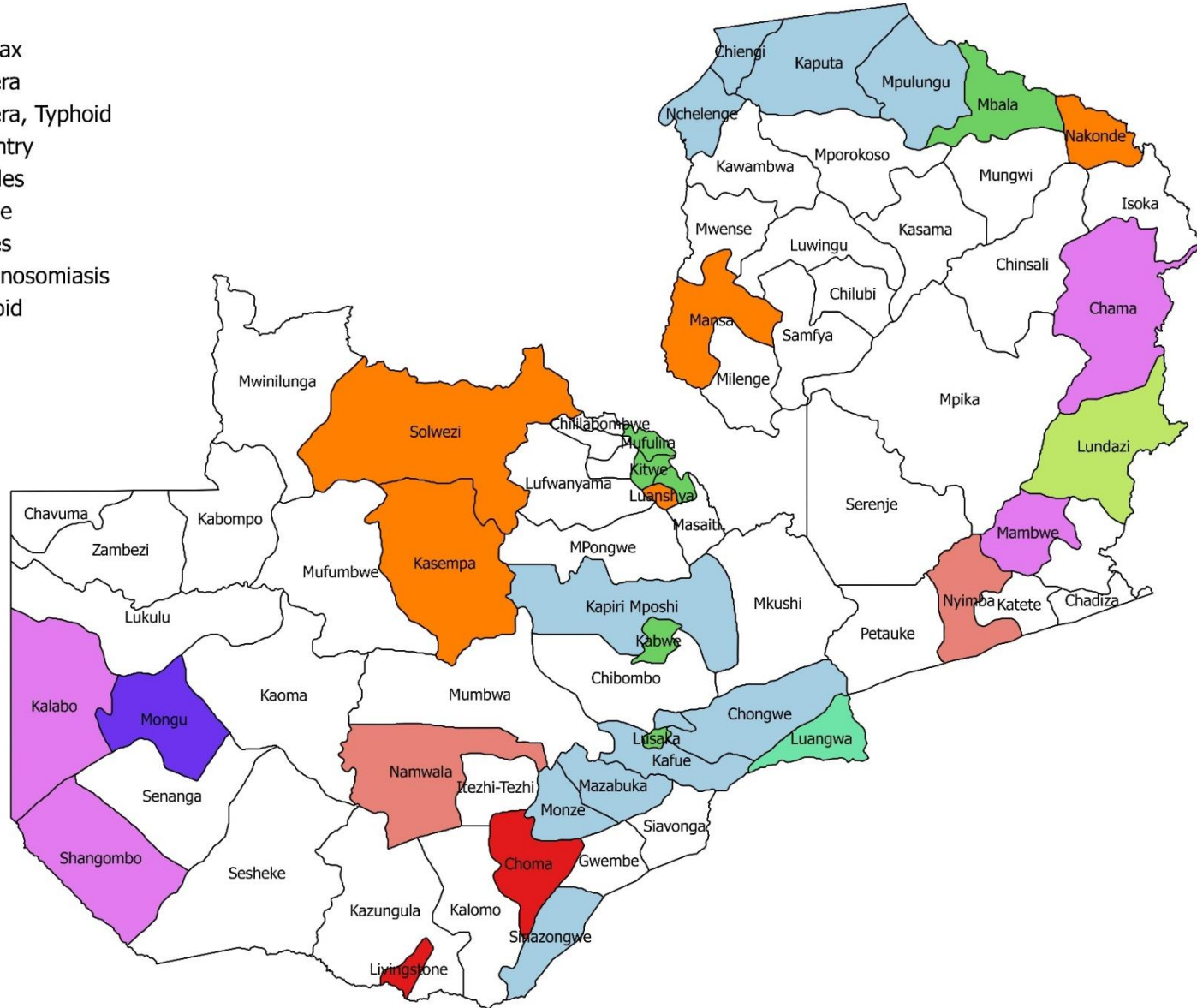
**MINISTRY OF HEALTH**

# Outline

- Background
- Current Cholera Situation
  - Statistics
  - Spot maps
  - Interventions
- Challenges / Gaps
- Support Required

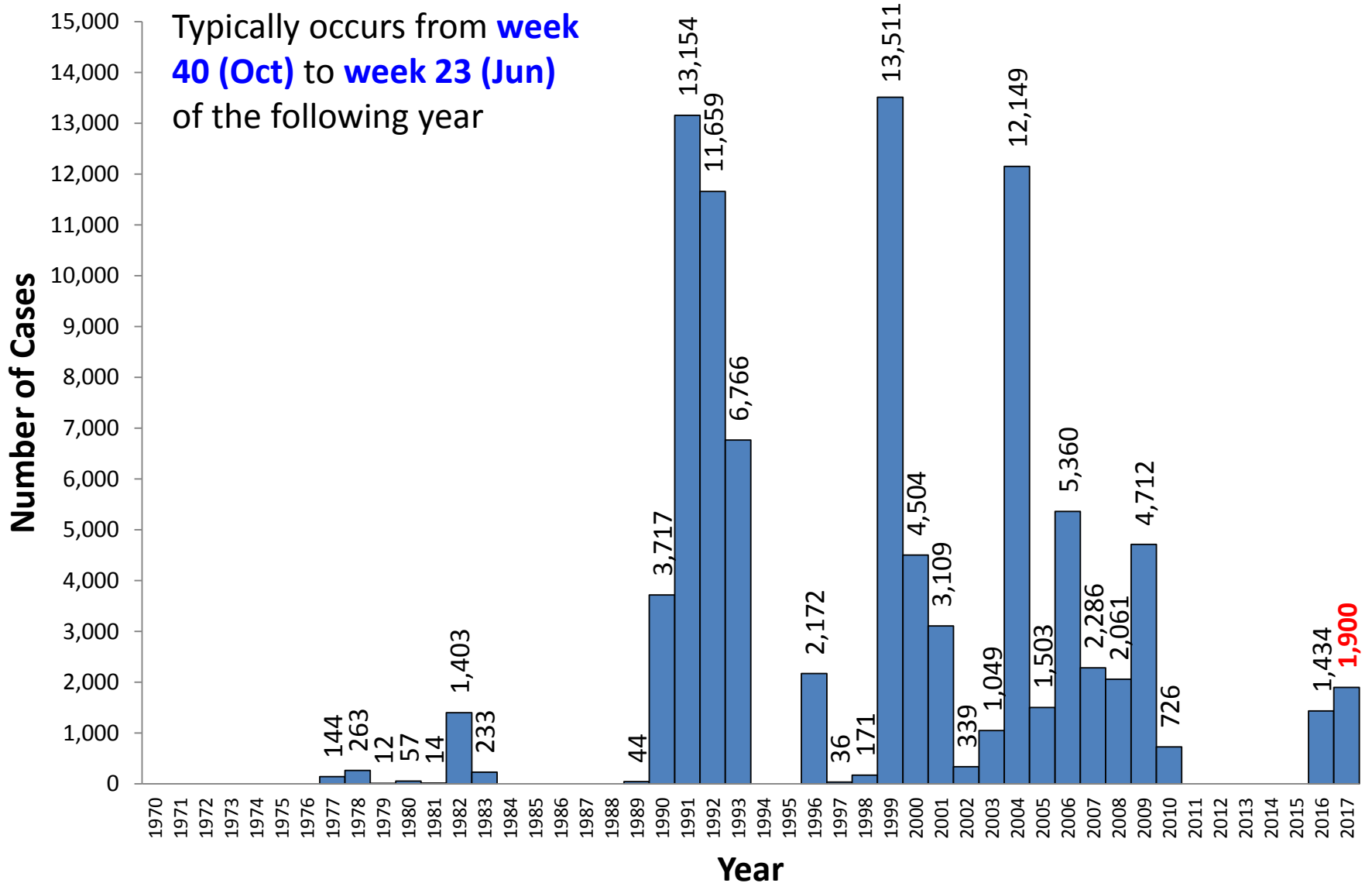
# Epidemic-prone Districts in Zambia

- Anthrax
- Cholera
- Cholera, Typhoid
- Dysentery
- Measles
- Plague
- Rabies
- Trypanosomiasis
- Typhoid



# Zambia: Cholera Cases by Year

## 1970 – 2017



# Cholera Outbreak 2017/18

- Declared: 6 October 2017 in Lusaka
- ZNPFI Public Health Emergency Operations Center (PHEOC) activated to support Lusaka DHO response
- Incident Management System (IMS) initiated
- Response escalated on 20 December 2017
  - Central Command at MoH

# Cases Countrywide: 6 Oct – 02 Jan 2018

District	Under Admission	Cumulative cases	Cumulative Deaths
Lusaka	166	1,901	45
Kabwe	6	8	1
Shibuyunji	0	6	0
Chongwe	0	6	0
Lundazi	3	4	1
Kapiri Mposhi	0	3	1
Ndola	0	2	0
Rufunsa	1	2	0
Chibombo	2	2	0
Kaoma	0	1	0
Kafue	0	1	0
Chirundu	0	1	0
Kalomo	1	1	0
Mazabuka	1	1	0
Mkushi	1	1	0
<b>Total</b>	<b>181</b>	<b>1,940</b>	<b>48</b>

# Current Situation in Lusaka District

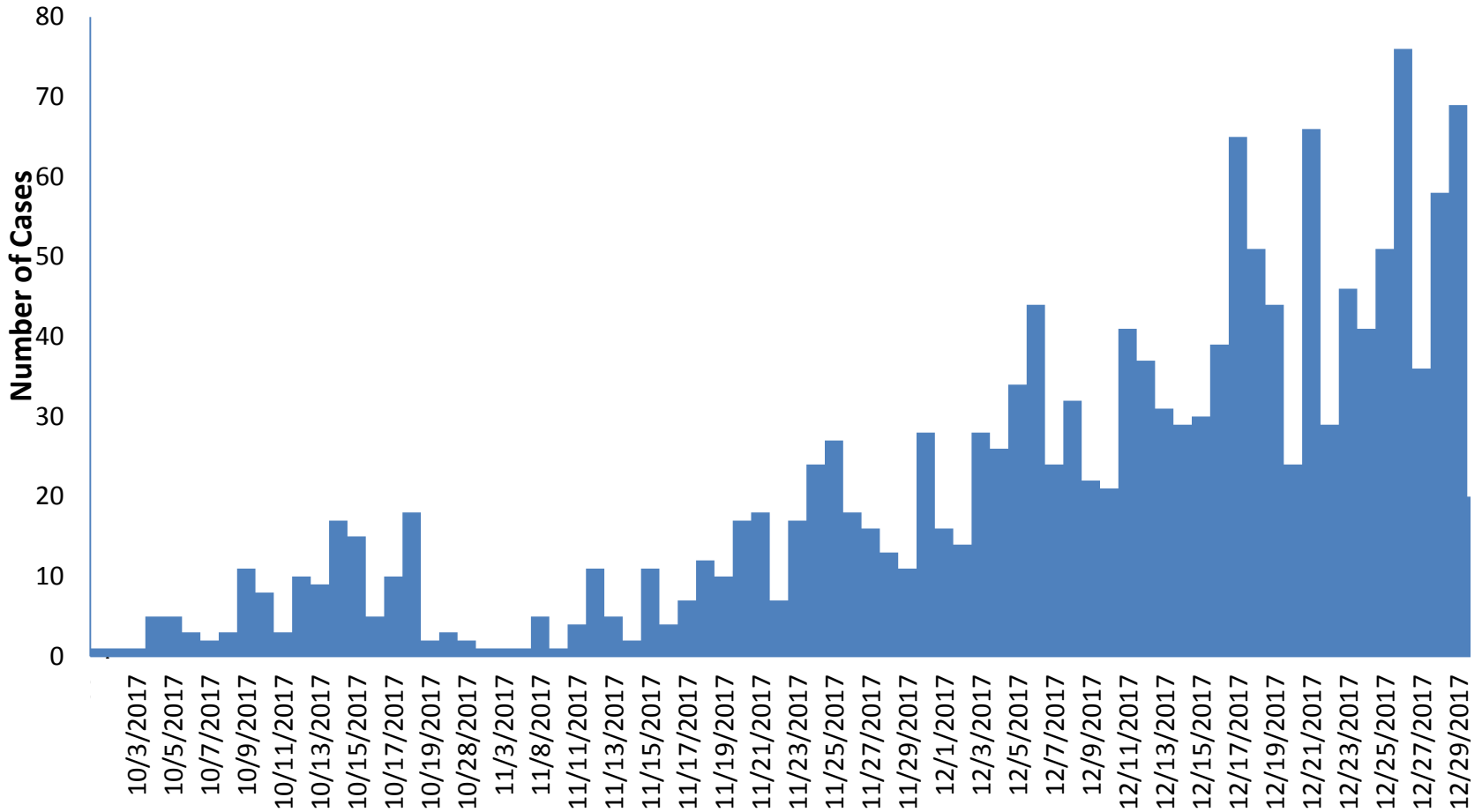
- Cumulative cases, 2 January 2018 (06:00) = **1,901**

SubDistrict	New Cases	Cumulative Cases	Cumulative Deaths	Community Deaths
Chipata	10	925	19	09
Kanyama	21	545	19	09
Matero	18	219	05	04
Chawama	13	157	01	01
Bauleni	02	37	00	00
Chelstone	0	18	01	01
Total	64	1,901	45	24

- **CFR = 2.4% (Overall Facility CFR = 1.1%)**
- Male : Female (56% : 44%)
- Children  $\leq$  5 years (40.1%)

# Cholera cases in Lusaka district by date of symptom onset

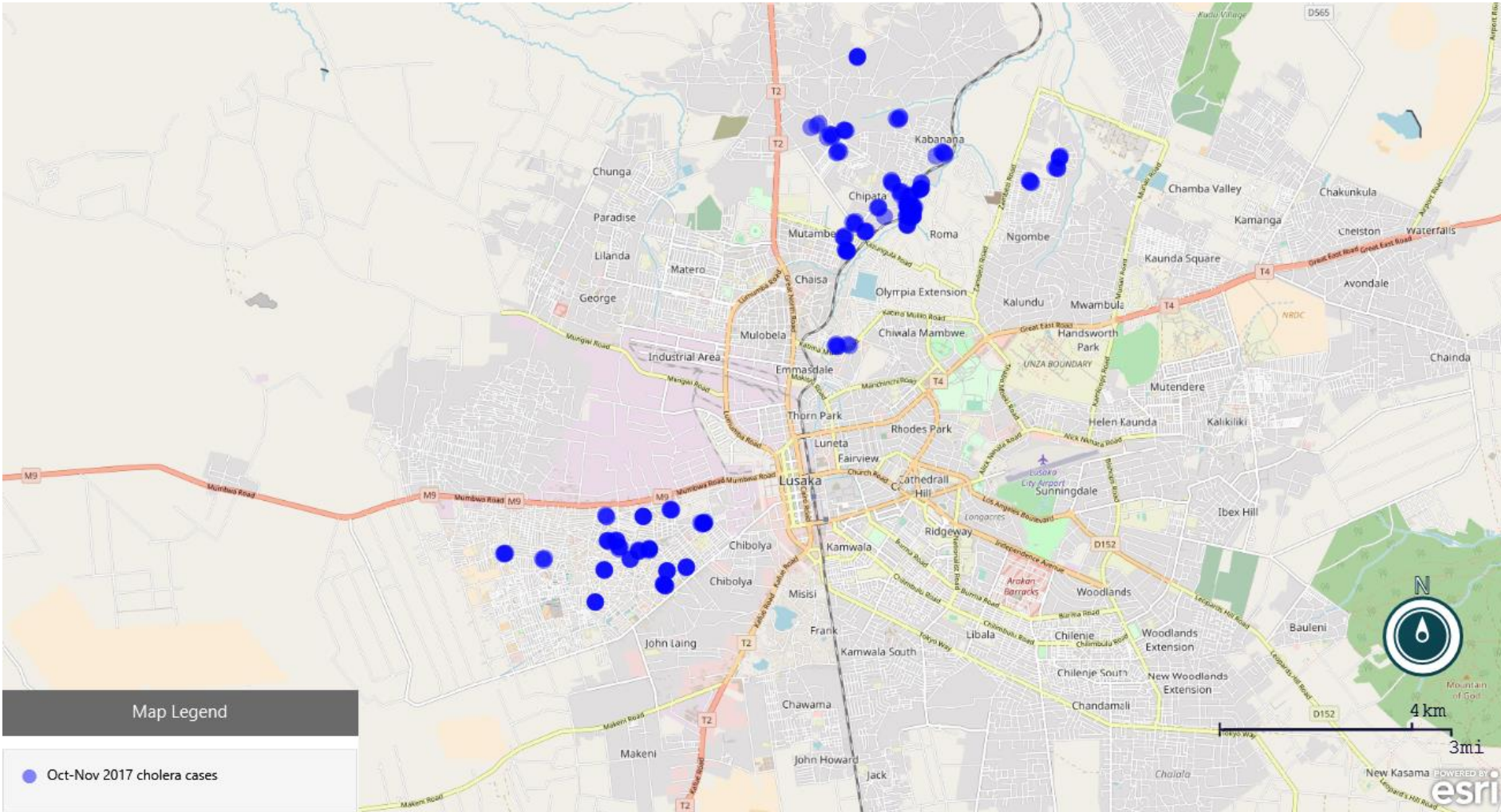
29 December 2017 (N=1,789)





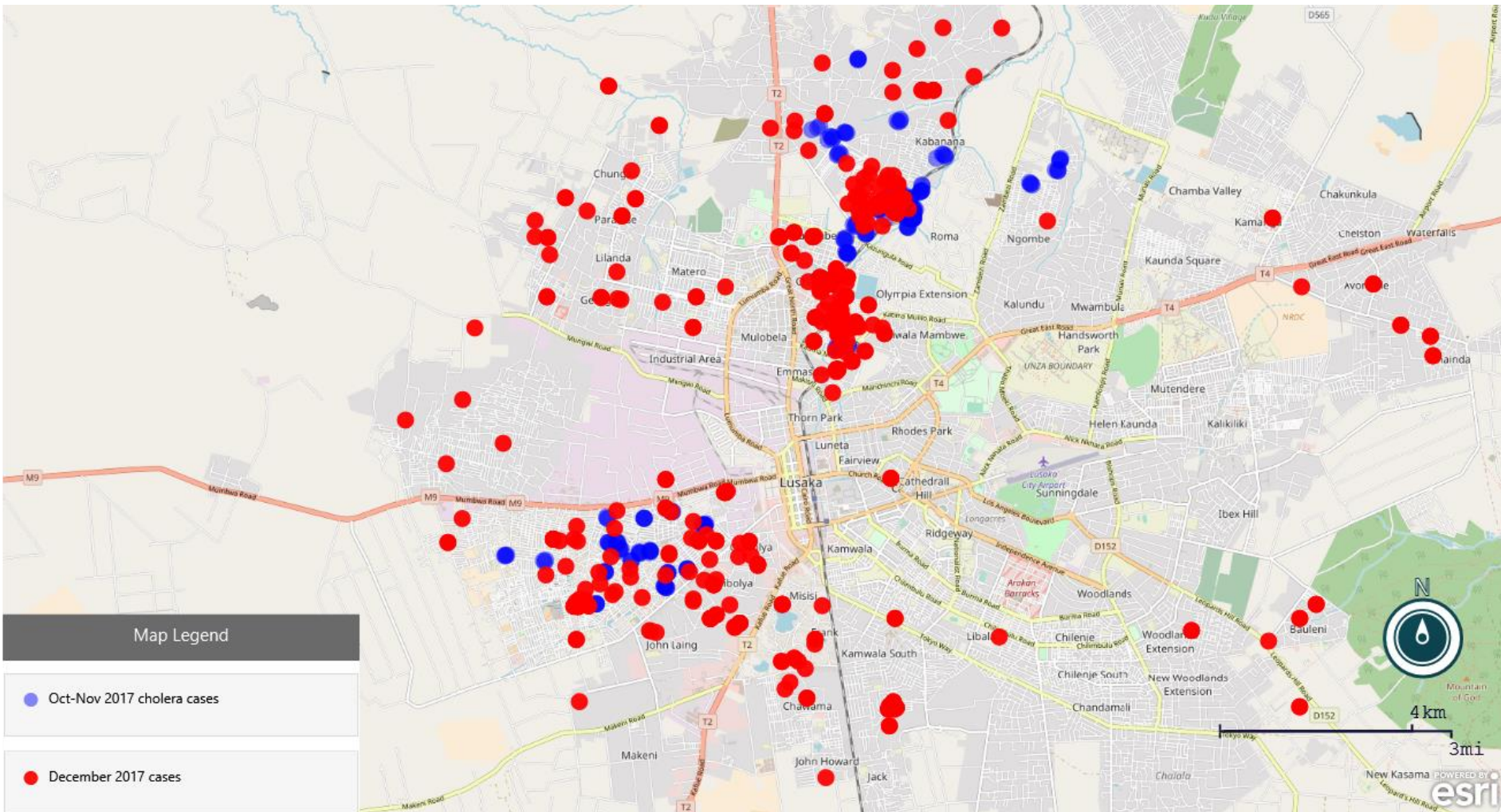
# Spot Map of Cases

## October & November 2017



# Spot Map of Cases

6 October – 31 December 2017





# Laboratory Findings (1):

## Clinical Samples

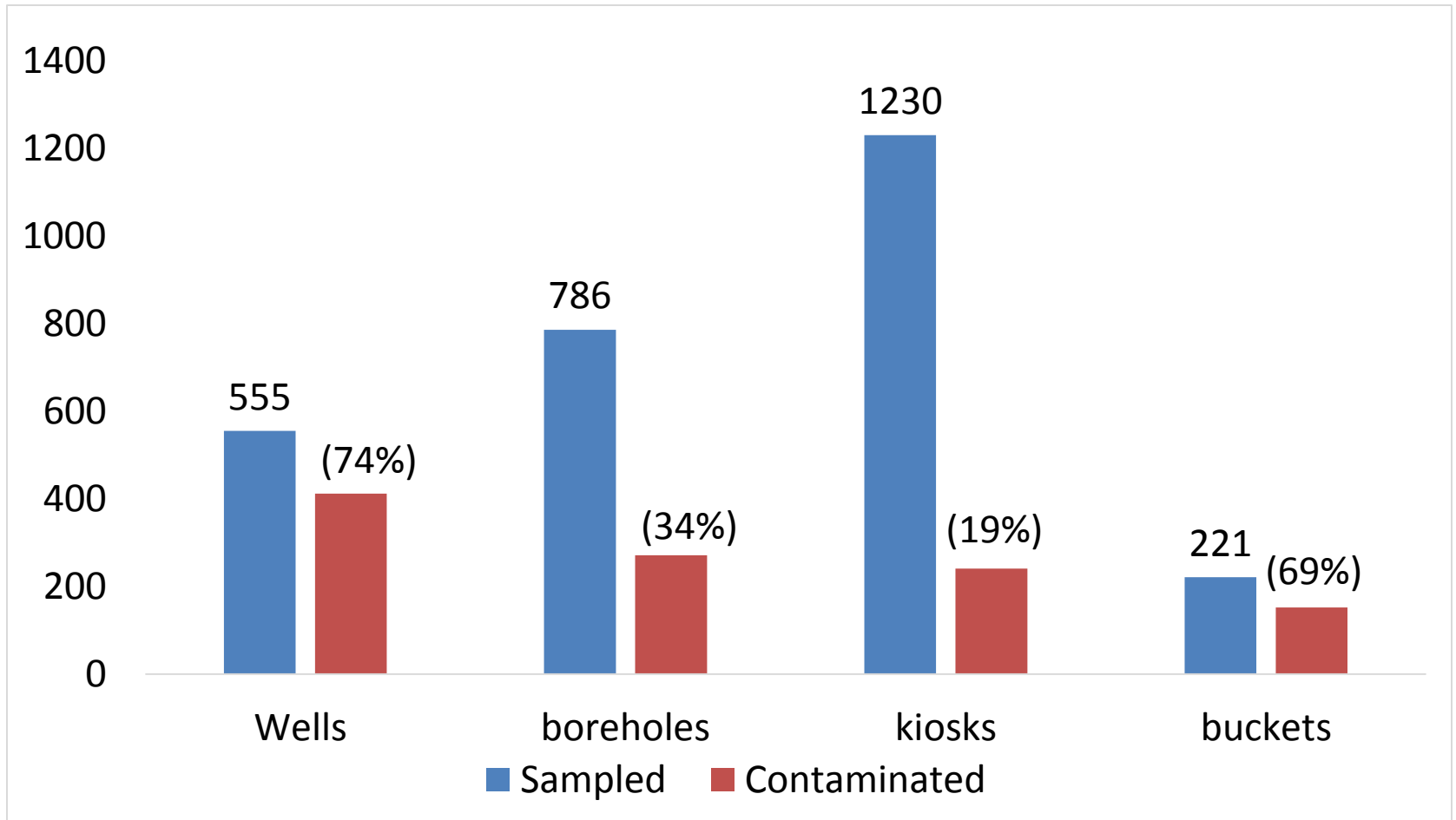
140 *Vibrio cholerae* 01 Ogawa

Facility	Samples	Findings
Chipata FLH	176	76 <i>V. cholerae</i> 01 Ogawa; 02 Salmonella spp; 01 Shigella flexineri; 01 Shigella dysenteriae
Kanyama FLH	82	03 <i>V. cholerae</i> 01 Ogawa; 01 Shigella dysenteriae; 01 Shigella flexineri
Chilenje Clinic	4	01 <i>V. cholerae</i> 01 Ogawa
Chawama FLH	134	34 <i>V. cholerae</i> 01 Ogawa; 01 Shigella dysenteriae
Bauleni Clinic	17	03 <i>V. cholerae</i> 01 Ogawa
Shibuyunji	7	05 <i>V. cholerae</i> 01 Ogawa
UTH	23	05 <i>V. cholerae</i> 01 Ogawa; 02 Salmonella spp; 01 Shigella flexineri
Mpanshya Mission	2	01 <i>V. cholerae</i> 01 Ogawa
Ngwerere	6	04 <i>V. cholerae</i> 01 Ogawa
Coptic Hospital	2	01 <i>V. cholerae</i> 01 Ogawa
Chelstone FLH	14	05 <i>V. cholerae</i> 01 Ogawa
Kalingalinga Clinic	1	01 <i>V. cholerae</i> 01 Ogawa
Kaoma Dist. Hosp	1	01 <i>V. cholerae</i> 01 Ogawa

# Laboratory Findings (2): Environmental Samples

- Water
  - **1/3 contaminated**
    - Faecal coliforms
    - *E. coli*
    - *Vibrio cholerae*
- Food [*meat, chicken, fruits, mushrooms, michopo*]
  - Sources including ZamChick, Wimpy, Hungry Lion, Corner Bakery Engen, Soweto mkt, BH mkt, Munyaule mkt, Chibolya abattoir, Food handlers
    - Faecal coliforms
    - *E. coli*
    - *Vibrio cholerae*

# Laboratory Findings (2): Water Sampling (H<sub>2</sub>S)



# Interventions

- ZNPHI Public Health Emergency Operations Center (PHEOC) activated to support Lusaka DHO response
- Incident Management System (IMS) initiated
- Multisectoral response
  - MoH
  - MWDESP
  - MLG
  - DMMU
  - MoD
  - MoHA
  - LCC
  - LWSC
  - WHO
  - UNICEF
  - CDC
  - EQUIP Zambia
  - Zambia Red Cross Society
  - CHAZ
  - CIDRZ
  - USAID Deliver

# Interventions *cont'd*

- Command posts in all 6 Lusaka subDistricts
- Response escalated on 20 December 2017
  - Central Command at MoH
  - Led by Hon. Minister of Health
- The **Public Health Act**, (Laws, Volume 17, Cap. 295), **The Public Health (Infected Areas) (Cholera) Regulations, 2017** invoked and **Statutory Instrument No.79 of 2017** issued

# Interventions *cont'd*

- Human Resource Mobilisation
  - Staff recruited / relocated / recalled: Doctors, COs, Nurses, EHO, EHTs, HP
  - Student involvement: EHT & Medical students
- Case Management
  - CTCs at Chipata, Kanyama, Matero, Chawama, Bauleni, & Chelstone
  - Staff & supplies allocated
- Active Case Finding / Contact Tracing



# Interventions *cont'd*

- Provision of safe water (LWSC/DMMU)
  - All affected peri-urban areas
- Environmental Management
  - Water sampling
  - Inspection of public premises, businesses & food outlets
  - Disinfection of toilets & latrines
  - Treatment of water sources
  - Waste management

# Interventions *cont'd*

- Health Promotion
  - Chlorine distribution
  - IEC material distribution
  - Door-to-door campaigns
  - Mobile PA announcements
  - Media programs /interviews
- Public Communication
  - 24hr Call Center
  - Media brief & press releases

# Interventions *cont'd*

- Oral Cholera Vaccine
  - Assessment done
  - Zambia plan & request approved (4Million doses)
  - Vaccine stocks shipped (Expected 6 Jan. 2018)
  - Initial target: **Lusaka**
  - Other cholera hotspots earmarked for 2018 Qtr 2/3
  - Microplan for implementation finalised
  - Training of field supervisors & vaccinators in progress

































# Challenges

- **Access to Clean Water and Sanitation**
- **Waste management**
- **Markets and street vending**
  - **Evidence for role of contaminated food in outbreak spread**
- **Transport**
- **Supplies**
  - Chlorine
  - PPE
  - Disinfectants
  - Medical & laboratory
- **Dissemination of Health Education Messages**

# Support and Action Required

- **Water and Sanitation** → **MWDSEP, LWSC, LCC, ZNS, DMMU**
- **Markets and Street Vending** → **MLG, LCC, ZDF, ZP**
- **Waste Management** → **MWDSEP, MLG, LCC, ZDF**
- **Burying Shallow Wells** → **MLG, LCC, ZP, ZNS/ZDF**
- **Case Management & Contact Tracing** → **MoH, UTH, CPs**
- **Transport / Fuel** → **GRZ, DMMU, CPs**
- **Emergency Response Supplies** → **GRZ, DMMU, CPs**
- **Operational Costs** → **GRZ, DMMU, CPs**
- **Oral Cholera Vaccine (OCV)** → **GRZ, WHO, CPs**

# Financial Support Required

S/N	Item description	Monthly Cost estimate	3 Months Cumulative Cost Estimate
1	Medical Supplies	8,666,666.67	26,000,000
2	Health Promotion and Education	2,515,833.33	7,547,500
3	Volunteer/Community Health Worker support	2,106,000.00	6,318,000
4	Emergency Response Logistics	2,484,160.00	7,452,480
5	Stakeholder Coordination Meetings	24,000.00	72,000
6	Portable Water Supply	4,872,631.42	14,617,894.25
7	Water Point Installation	2,460,000.00	0.00
8	Burying Shallow wells	1,000,000.00	3,000,000.00
9	Pit Latrine Emptying	1,468,500.00	4,405,500.00
10	Water Bowser Hire	1,932,000.00	5,796,000.00
11	Solid Waste Management	3,556,750.00	10,670,250.00
12	Lusaka Clean-up operation	4,143,981.22	0.00
13	Support to 9 provinces for preparedness	7,597,298.89	22,791,896.67
14	Oral Cholera Vaccine campaign logistics	13,751,031.00	0.00
<b>TOTAL</b>		<b>56,578,852.53</b>	<b>108,671,520.92</b>

*Thank You*