

The DD Season Plan in Cape Town

Planning & implementation strategy:
An iterative approach

EH DD case investigation:

5–page document.

First 2 pages are about the **diarrhoeal episode**:

Patient details, living conditions, feeding practices & personal hygiene, details of the health problem, care received, from whom and where, knowledge of ORS and danger signs

The last 3 pages are only completed in the case of a **diarrhoea death under 5 years of age**:

Asks for a description of the child's illness, care-seeking during the illness, care received, waiting times, medication taken, etc.

Lessons learned: Severe DD cases

39 home investigations:

- Over half the cases could not be traced;
- With 1 exception all cases had access to water within norms but in a small no. the container where it was kept was dirty;
- All had access to toilets, but in half the toilets were defective and dirty;
- In half, hygiene conditions inside and/or outside the dwelling were poor, animals were kept in premises and flies were present;
- Half had very poor knowledge of safe food handling practices;
- 83% of the children were young enough to be milk-fed and of those 60% were on bottle;
- Hand-washing, bottles and teats hygiene was deficient in over half the cases.

Lessons learned: Early Death Notification

Early death notification: Home investigations:

- The majority of cases could not be traced.
- A large no. of children died at home and of those all had been seen at PHC or GPs a few days before. Several had been recently discharged from hospital.
- 40–60% split between formal vs informal housing
- All reported giving ORS, but insufficient amounts and not often enough. In half the cases accompanied by other traditional remedies
- Vast majority heard of danger signs but still did not recognise when things were turning for the worse
- None reported having had any interaction with IMCI workers.

5 MIN SCRIPTS FOR TALKS RELATED TO DIARRHOEA

ORAL REHYDRATION SOLUTION

WHAT DO YOU DO IF YOUR CHILD HAS DIARRHOEA OR VOMITING?

- Take your baby to the nearest clinic
- Inform staff immediately that your child has diarrhoea
- Continue to feed your child while sick make sure your bottles and teats are clean
- Wash your hands 5 times a day PLUS after changing the nappy, before preparing food and before feeding
- Feed your baby as usual PLUS use Salt/Sugar Solution to prevent dehydration
- Stop/delay traditional treatments that give purging until the child recovers NB: Don't be judgmental and critical of traditional medicines.

HOW DO YOU MAKE THE SUGAR AND SALT SOLUTION?

- Wash hands with clean water and soap
- Pour boiled water into a clean 1 litre bottle
- Pour the water into a clean jug or bowl
- Add ½ teaspoon of salt into the water
- Add 8 teaspoons of sugar and mix
- Try the solution for taste, to see that you did not get the ingredients wrong
- Store the solution in a clean bottle that can be closed/covered

HOW MUCH SOLUTION SHOULD BE GIVEN TO THE BABY?

- Feed your child the solution every time there is vomiting and every time there is a loose stool
- Give as much as the water the child lost PLUS a bit more to replace all liquids that are lost and thus prevent dehydration.

HOW LONG SHOULD YOU GIVE THE CHILD THE SOLUTION?

- Give for as long as the child is still vomiting or having diarrhoea
- Give everyday until the diarrhoea and/or vomiting stops

WHAT ARE THE DANGER SIGNS?

- If the symptoms do not get better after 2-3days please take your child back to clinic and/or doctor
- Go preferably to the same place you went to the first time - they will have the history of your child sickness and will see that something else needs to be done.
- Don't wait your turn: Inform the staff immediately as you arrive that your child is not better.

HOW CAN WE WASH THE HANDS 5 TIMES A DAY IF WE HAVE NO TAP WATER?

- Use the squeeze bottle. Learn how to make it from scratch.
- Provide materials to make a squeeze bottle to take home
- Practice using the squeeze bottle.

DISMISS MYTHS

MYTH: The ORS treatment **is not strong medicine** and does not help.

FACT: The ORS if administered properly is enough to replace liquids that the child has lost due to diarrhoea or vomiting. It will prevent the child from dying.

MYTH: You **should not go back to that Clinic** - they only advised you to feed the child ORS. The clinic DID NOT GIVE YOU OTHER MEDICATION so it was no help.

FACT: This is not true! ORS is all that is needed to help your child if you make it correctly, give enough of it and for as long as necessary.

MYTH: If you given ORS and you **child is not better, you should stop after a day or two** and go to another clinic or to a private doctor.

FACT: This is not true! ORS must be carried on whilst you take the child back for care. You should preferably go to the same place where your child was seen before. A private doctor is not a better alternative.

DIARRHOEA INFO FOR GP'S

The peak diarrhoea season in the Cape Town Metro in February to May – please be aware and manage these children appropriately

Management checklist: child has diarrhoea but is not dehydrated :

1. Instruct parents on how to make sugar-salt drink/ORS and recommend they give 50-100ml with each loose stool to replace diarrhoeal losses and prevent dehydration. Give small amounts at a time. Special drink: 1ℓ water + 8 teaspoons sugar + ½ teaspoon salt
2. Do not prescribe medication such as loperamide, antiemetics, or routine antibiotics.
3. Prescribe **Zinc** 10mg daily for 10 days for children <10 kg and 20mg daily for children >10kg and 20mg daily for children >10kg. If unavailable refer to local clinic to receive course of zinc that day. This shortens the duration and recurrence of diarrhoeal disease.
4. Ensure parents know the **danger signs** and where to go for help if signs are present.
5. Emphasize the **nutritional advice** listed and that regular feeds should continue plus extra liquid
6. Record episode and weight in Road to Health Booklet

Refer if present and make caregivers aware of danger signs

Take the child to the clinic when:

- Child is not able to drink or breastfeed.
- Child vomits everything that he/she drinks and eats.
- Child is having convulsions/fits
- Child is weak or lethargic
- Child has difficulty breathing.
- There is blood in the child's stools.
- Child passes less or no urine (dry nappy)

Children which need to be referred immediately:

- Dehydrated children
- Any of danger signs
- Diarrhoea in children under 6 months
- Diarrhoea with fever >38°C
- Prolonged diarrhoea for more than 5 days
- Significant weight loss
- Diarrhoea in immunocompromised child
- Any features of associated malnutrition
- Dysentery

Pamphlet for GPs, delivered by EHPs using connections established during their inspection of medical waste producers.

Nutritional Aspects of diarrhoea

- Use every opportunity to promote breastfeeding for prevention of diarrhoea
- Advise caregiver to continue breastfeeding/milk feeds and age appropriate diet during the episode
- Do not advise to dilute or stop milk
- Advise an extra meal/feed per day for a week to rehabilitate from the episode
- Advise that the child get weighed at local clinic within 24 hours of presentation at GP (can also get zinc there)

"Flying Squad" ambulance transfers

- Contact Metro Ambulance 021-937 0300 when a very sick child needs to be transported to a receiving health facility or hospital. **Do not encourage the use of a public transport.** Ensure that child has access to fluids during referral and ambulance transfers.
- If possible, introduce a naso-gastric feeding tube or commence IV fluids else give ORT via cup and teaspoon
- If the child has features of shock (lethargy, prolonged capillary refill, rapid pulse with poor volume) s/he requires oxygen and an intravenous or intraosseous fluid bolus as well as airway protection and must be transported by ambulance

Refer to a nearby 24 hour facility for stabilisation rather than to a central hospital. 24 hour Community Health Centres are:

- Khayelitsha Site B - 021-361 3470
- Guguletu - 021-637 1280
- Hanover Park - 021-692 1240/1/2/3
- Mitchells Plain - 021-392 5161
- Kraaifontein - 021-987 0080
- Retreat - 021-712 5105/55/92
- Delft - 021-954 2237
- Elsies River - 021-931 0211/2/3
- Vanguard - 021-694 5540/1



Cape Town:

*263 informal settlements
All are visited weekly by EHP
2010=16,141 visits to ISs
done by EHPs;

NB: CoCT has just over half
the ratio of EHP per
population as recommended
by the DoH

*W&S infrastructure norms:
1 toilet: 5 households;
1 tap: 25 households, not
further than 100 meters away;
Weekly refuse removal from
door-step;

834 schools
1,854 crèches registered
3,187 informal food vendors
registered

INFORMAL SETTLEMENT REPORT					
MONTH & YEAR: APRIL 2011					
No	Name	Structures	No. of toilets	No. of toilets required (1:5)	Toilets Shortfall
1	BV	95	20	19	-1
3	PK	507	90	101	11
5	DC	89	14	18	4
6	DDD	20	7	4	-3
7	GC	469	103	94	-9
8	GP	907	137	181	44
9	HV	1 050	288	210	-78
10	KF	1 000	153	200	47
11	LA	300	39	60	21
12	MV	85	20	17	-3
13	ST	120	5	24	19
14	MC	223	94	45	-49
15	PH	1 050	53	210	157
16	PT	41	23	8	-15
17	RAST	420	94	84	-10
18	SHU	488	116	98	-18
19	SC	10	5	2	-3
21	TK	3	1	1	0
21	UK	83	26	17	-9
22	VPL	11	3	2	-1
23	BUR	3 780	197	756	559
24	FR	340	169	68	-101
25	STOW	100	16	20	4
26	GRE	40	11	8	-3
27	WBJ	800	71	160	89
28	ETH	400	8	80	72
29	ENK	200	24	40	16
30	SIL	100	8	20	12
31	HR	40	8	8	0
32	ZW	140	35	28	-7
33	SLP	90	22	18	-4
36	SAN	32	7	6	-1
	Total	13 033	1 867	2 607	740

INFORMAL SETTLEMENT REPORT					
MONTH & YEAR: APRIL 2011					
No	Name	Structures	No. of toilets	No. of toilets required (1:5)	Toilets Shortfall
1	PK	507	90	101	11
2	DC	89	14	18	4
3	GP	907	137	181	44
4	KF	1 000	153	200	47
5	LA	300	39	60	21
6	ST	120	5	24	19
7	PH	1 050	53	210	157
8	BUR	3 780	197	756	559
9	STOW	100	16	20	4
10	WBJ	800	71	160	89
11	ETH	400	8	80	72
12	ENK	200	24	40	16
13	SIL	100	8	20	12
	Total not meeting norms	9 353	815	1 871	1 056
		72%		44%	
1	BV	95	20	19	-1
2	DDD	20	7	4	-3
3	GC	469	103	94	-9
4	HV	1 050	288	210	-78
5	MV	85	20	17	-3
6	MC	223	94	45	-49
7	PT	41	23	8	-15
8	RAST	420	94	84	-10
9	SHU	488	116	98	-18
10	SC	10	5	2	-3
11	TK	3	1	1	0
12	UK	83	26	17	-9
13	VPL	11	3	2	-1
14	FR	340	169	68	-101
15	GRE	40	11	8	-3
16	HR	40	8	8	0
17	ZW	140	35	28	-7
18	SLP	90	22	18	-4
19	SAN	32	7	6	-1
	Total meeting norms	3 680	1 052	736	-316
	TOTAL	13 033			

Why the “Squeeze Bottle”?

- Practical hygiene solution for hand washing
- Soap can be added-in
- Implies good understanding of spread of diseases
IE: oral-faecal contamination
- Uses recycling materials – waste minimization
- Empowers poor people – cheap & easy to make
- Every household and/or person in the family can have one
- Can be used indoors and outdoors where no water facilities available
- Can be carried around safely
- Uses little water (no waste of precious resource)



At home



In the community



In shebeens with condoms



At crèches

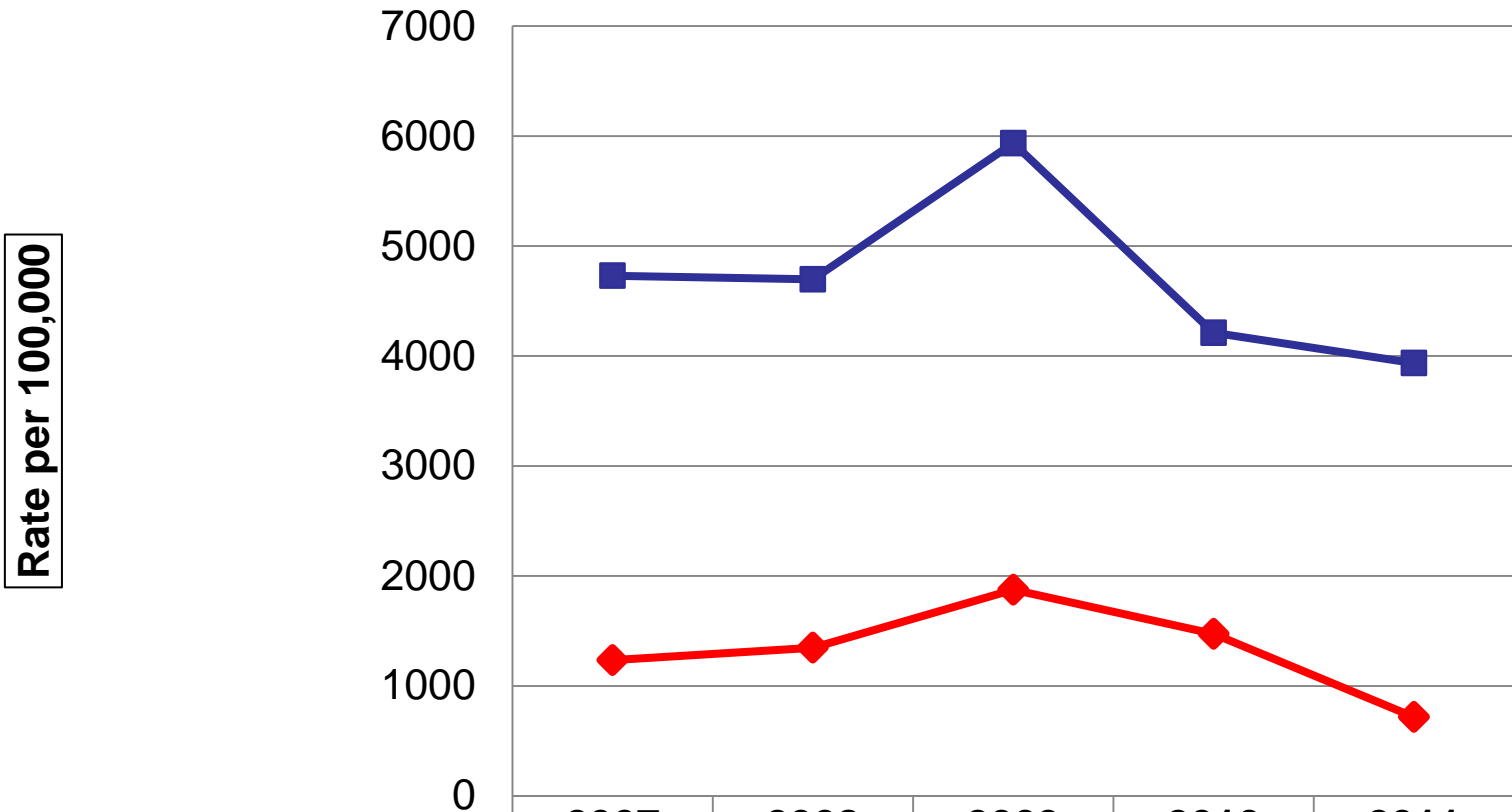


616 EH Health & Hygiene Projects:
128 Eastern SD
161 Khayelitsha SD

Conclusion and key learning lessons



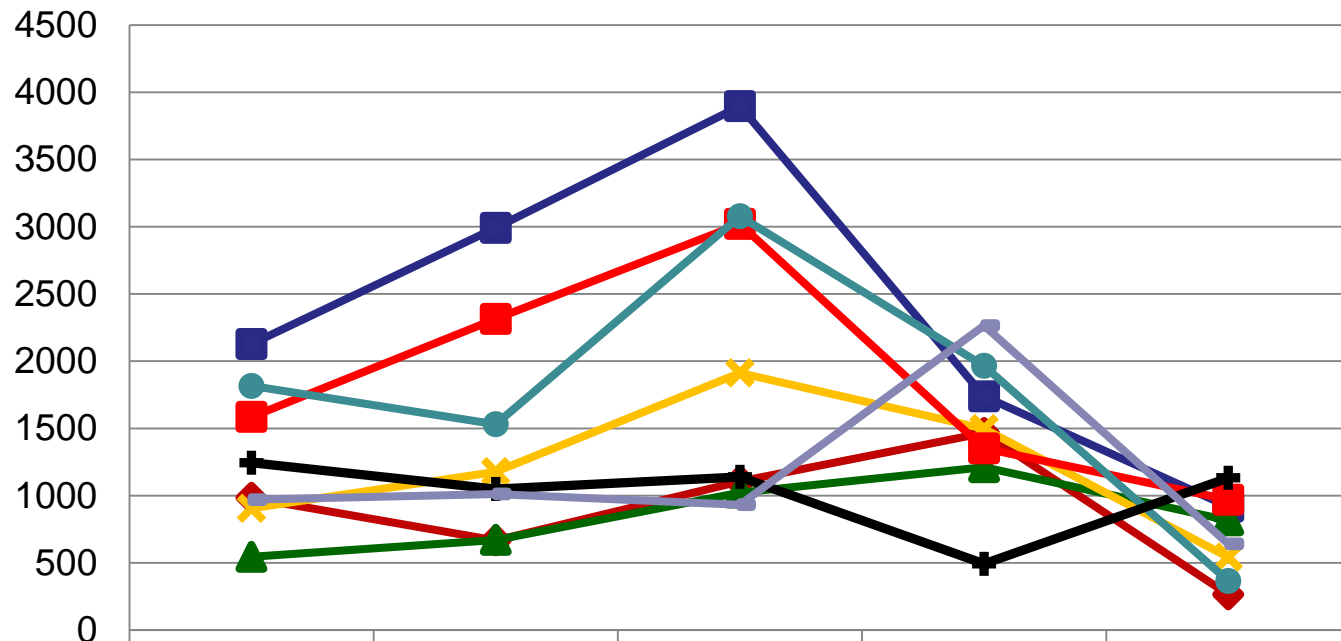
Metro District: Rates of Diarrhoeal Disease <5yrs at PHC facilities



	2007	2008	2009	2010	2011
◆ With Dehydration	1234	1347	1875	1474	717
■ Without Dehydration	4730	4697	5935	4211	3935

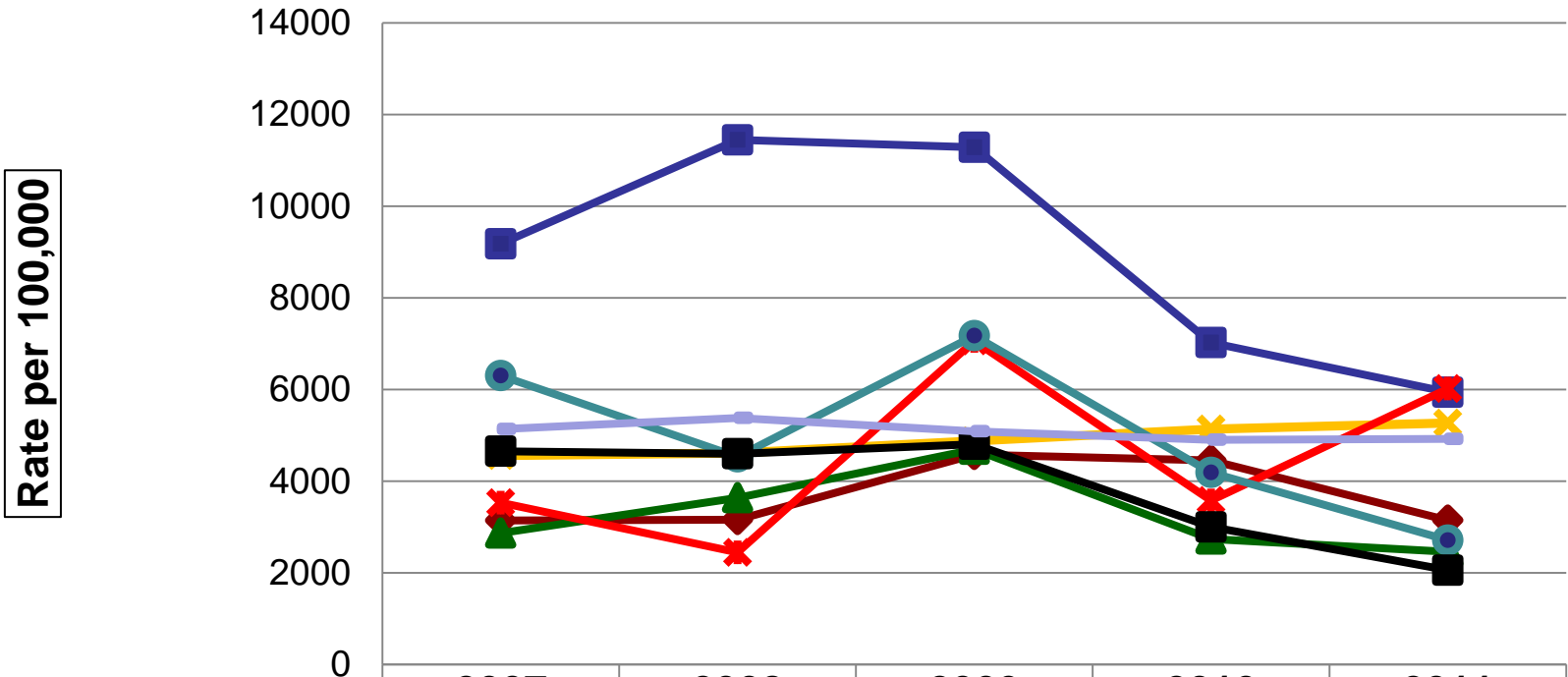
Metro Sub-districts: Rate of DD <5yrs with Dehydration - PHC facilities

Rate per 100,000



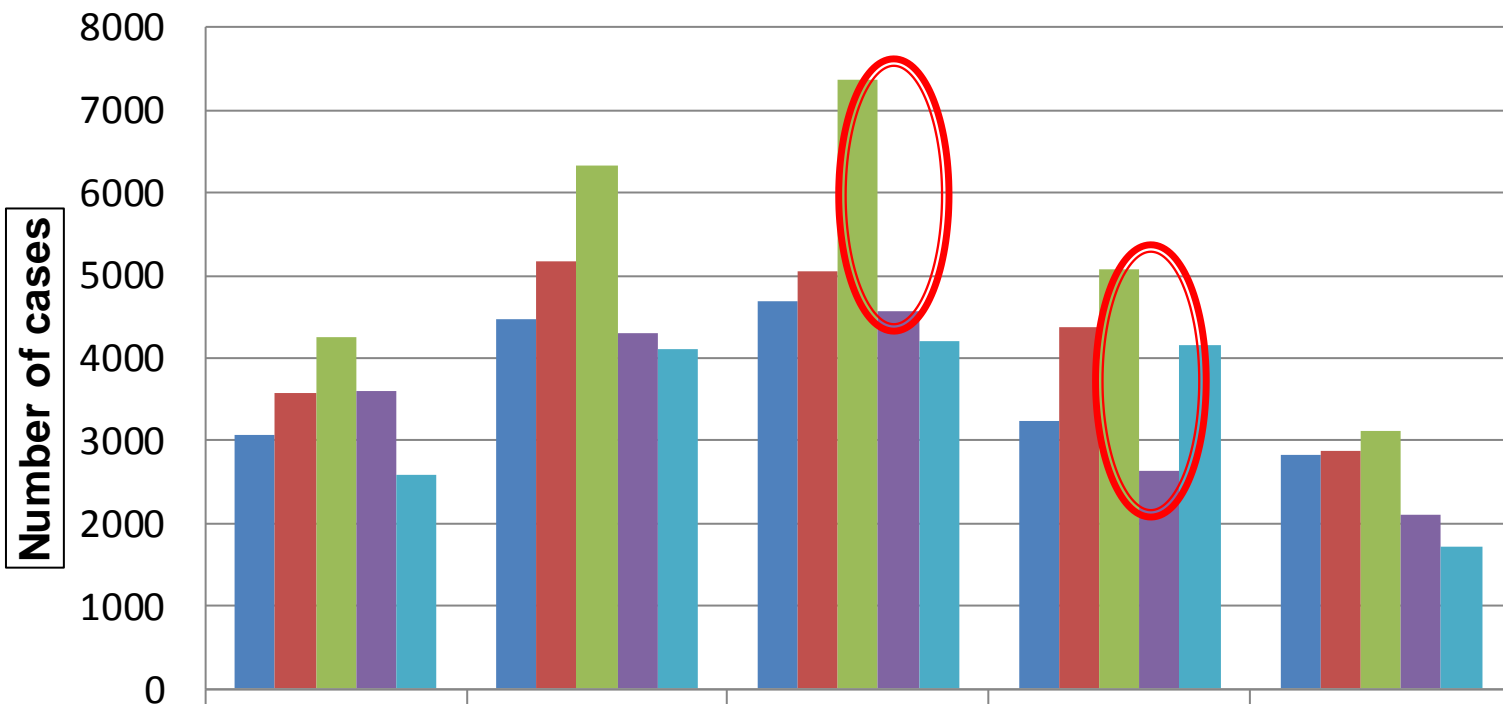
	2007	2008	2009	2010	2011
◆ Eastern	984	667	1106	1466	265
■ Northern	2128	2992	3896	1738	918
▲ Southern	545	670	1023	1212	815
✱ Western	905	1177	1913	1498	542
■ Khayelitsha	1585	2314	3021	1351	969
● Klipfontein	1816	1531	3078	1965	365
✚ Mitchells Plain	1245	1049	1139	492	1132
⊕ Tygerberg	970	1012	932	2265	640

Metro Sub-districts: Rate of DD <5yrs **without Dehydration** - PHC facilities



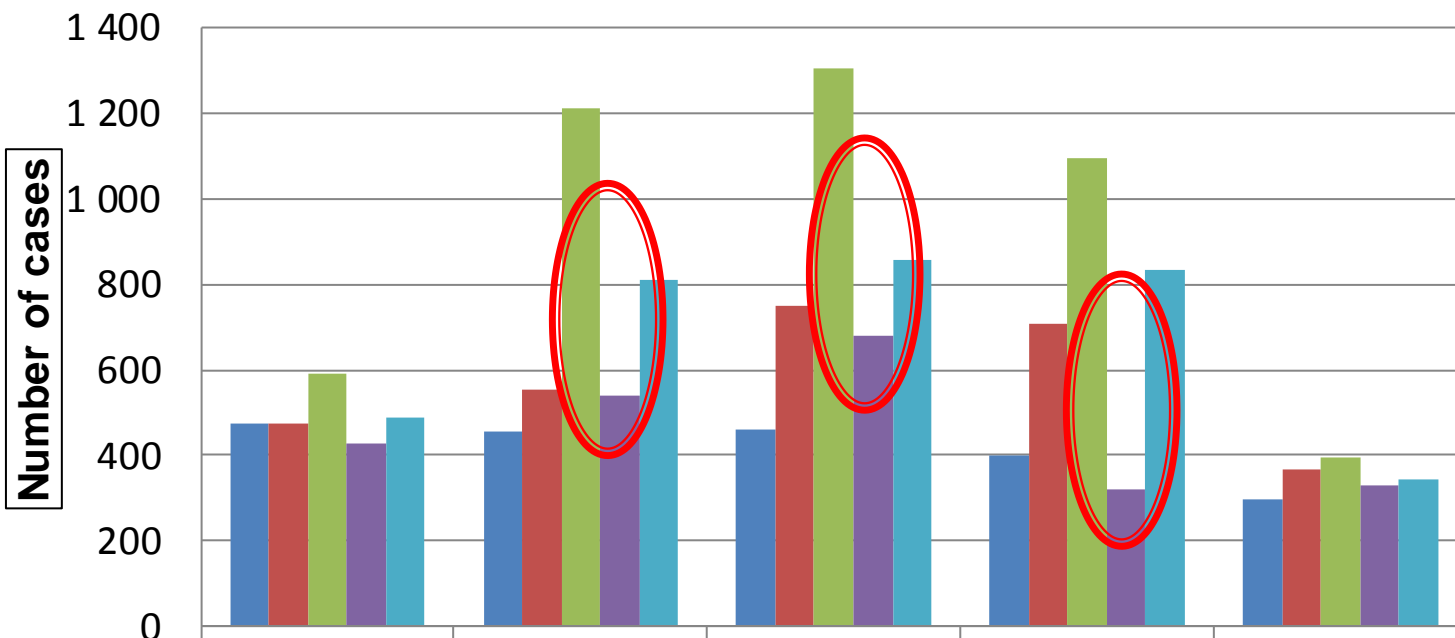
	2007	2008	2009	2010	2011
◆ Eastern	3142	3160	4580	4452	3146
■ Northern	9179	11446	11285	7022	5940
▲ Southern	2866	3636	4694	2737	2459
✕ Western	4559	4613	4879	5136	5269
✱ Khayelitsha	3530	2445	7059	3577	6018
● Klipfontein	6302	4531	7174	4190	2712
■ Mitchells Plain	4652	4598	4806	3001	2058
— Tygerberg	5137	5380	5087	4903	4922

Metro District: DD < 5yrs at PHC facilities



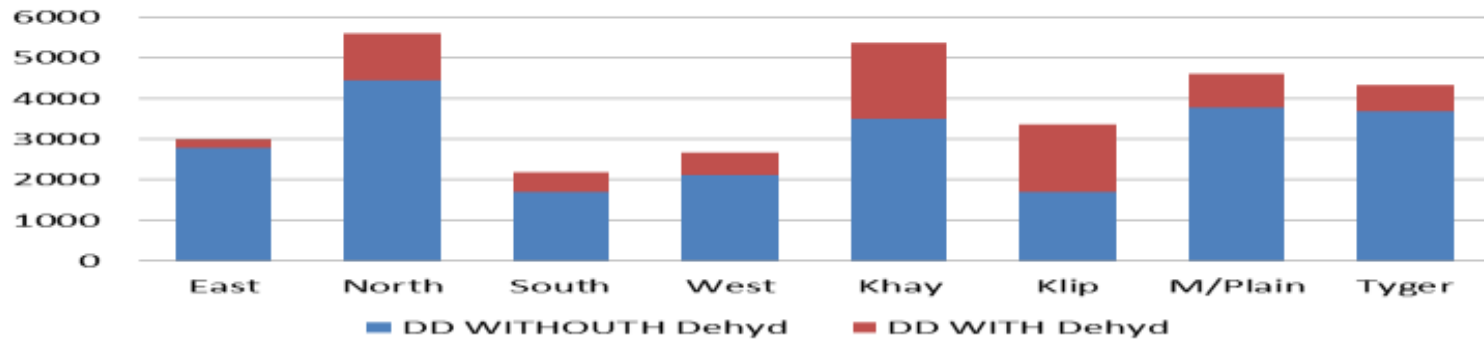
	Jan	Feb	March	April	May
2007	3080	4466	4688	3242	2842
2008	3579	5165	5055	4381	2882
2009	4260	6340	7371	5076	3132
2010	3602	4292	4558	2637	2116
2011	2578	4114	4212	4164	1710

Khayelitsha

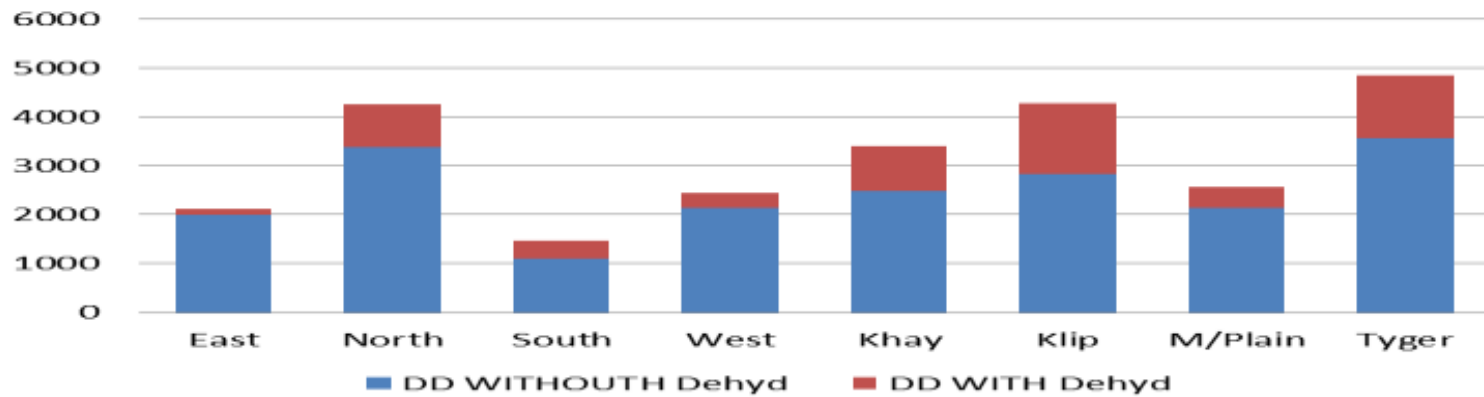


	Jan	Feb	March	April	May
2007	473	457	459	398	294
2008	475	552	749	708	366
2009	593	1 212	1 306	1094	393
2010	429	541	682	320	329
2011	488	810	859	835	345

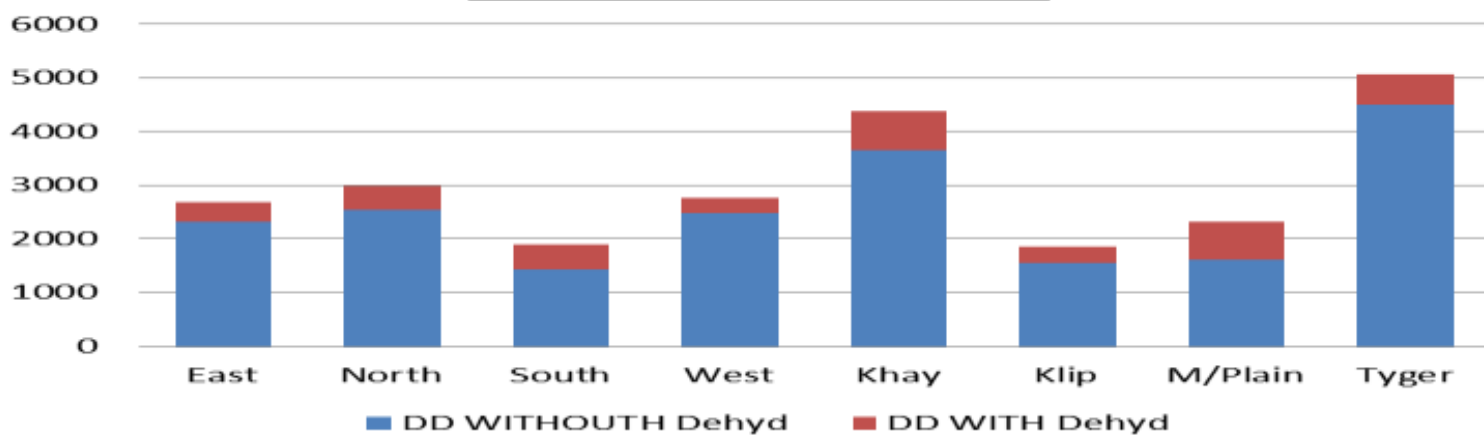
DD Season 08/09



DD Season 09/10



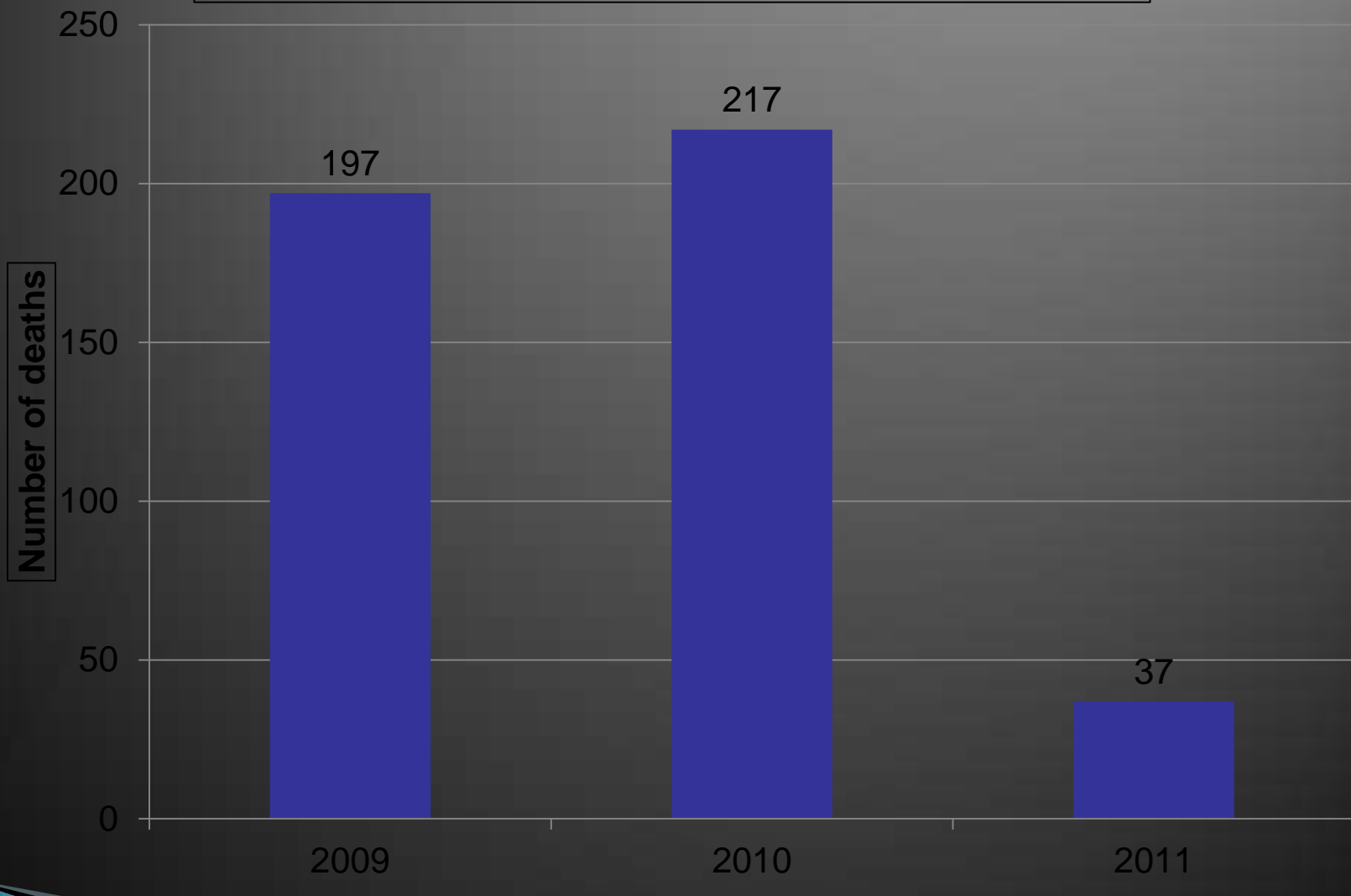
DD Season 10/11



Key Trends (1)

- ▶ Clearly discernable increase in number of diarrhoea cases until 2009;
- ▶ A significant decline across all sub-districts in 2010;
- ▶ A further decline in all sub-districts in 2011 in all months except for April 2011 (where a spike was noted for most sub-districts);
- ▶ 62% reduction in the incidence of diarrhoea with dehydration between 2009 and 2011
- ▶ Proportionally a greater drop in Diarrhoea with dehydration– multi-factorial explanation for an encouraging outcome;
- ▶ The question has arisen as to whether the precipitous drop in March/April 2010 could be ascribed to the Measles epidemic experienced last year.

Deaths due to diarrhoea and gastro-enteritis presumed infectious

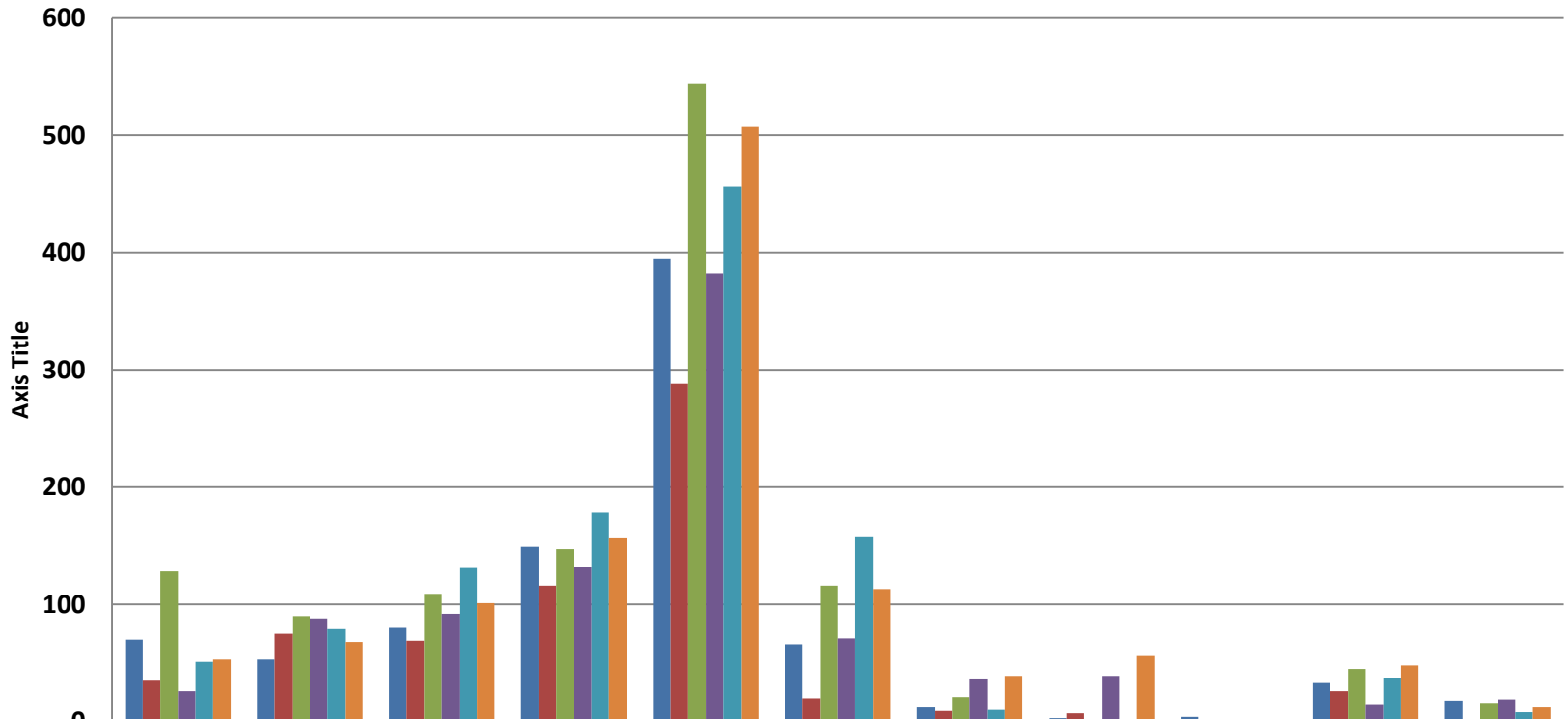


2011 includes 5 reported hospital deaths

Key Trends (2)

- ▶ 11% Reduction in Hospital Admissions in 2010 (the first reduction in admissions in 10 years);
- ▶ 50% reduction in Hospital Admissions in February 2011 compared to the previous year;
- ▶ Decline in In-Hospital mortality rate from 1,2% (2009) compared to 0,78% (2010) and declining further to 0,5% (2011).

Hospital Admissions Feb–Apr 2010 v 2011




	Victoria	NSH	KBH	TCH	RCCH	HH	CARNATIO N	KDH	GSH	ERH	FBH
■ Feb 2010	70	53	80	149	395	66	12	3	4	33	18
■ Feb 2011	35	75	69	116	288	20	9	7	0	26	0
■ March 2010	128	90	109	147	544	116	21	0	0	45	16
■ March 2011	26	88	92	132	382	71	36	39	0	15	19
■ April 2010	51	79	131	178	456	158	10	0	1	37	8
■ April 2011	53	68	101	157	507	113	39	56	0	48	12


Key Learnings (1)

- ▶ The comprehensiveness (deepening) of the response correlates with the early successes;
- ▶ As the complexity increases the need for greater decentralized management increases;
- ▶ The community based interventions are better marshaled at decentralized level;
- ▶ However it remains critical that there be a coordination across the whole system for three principal reasons:
 - i. A continued interface between the decentralized units, the referral – hHospitals (and their clinicians) creates a ' Singular Response with a Common Purpose';
 - ii. Removing obstacles for the decentralized units which arise from centralized processes, e.g. Supply Chain Management hold-up ups
 - iii. Coordination of centralized activities, e.g. Media campaign, ACSM materials development

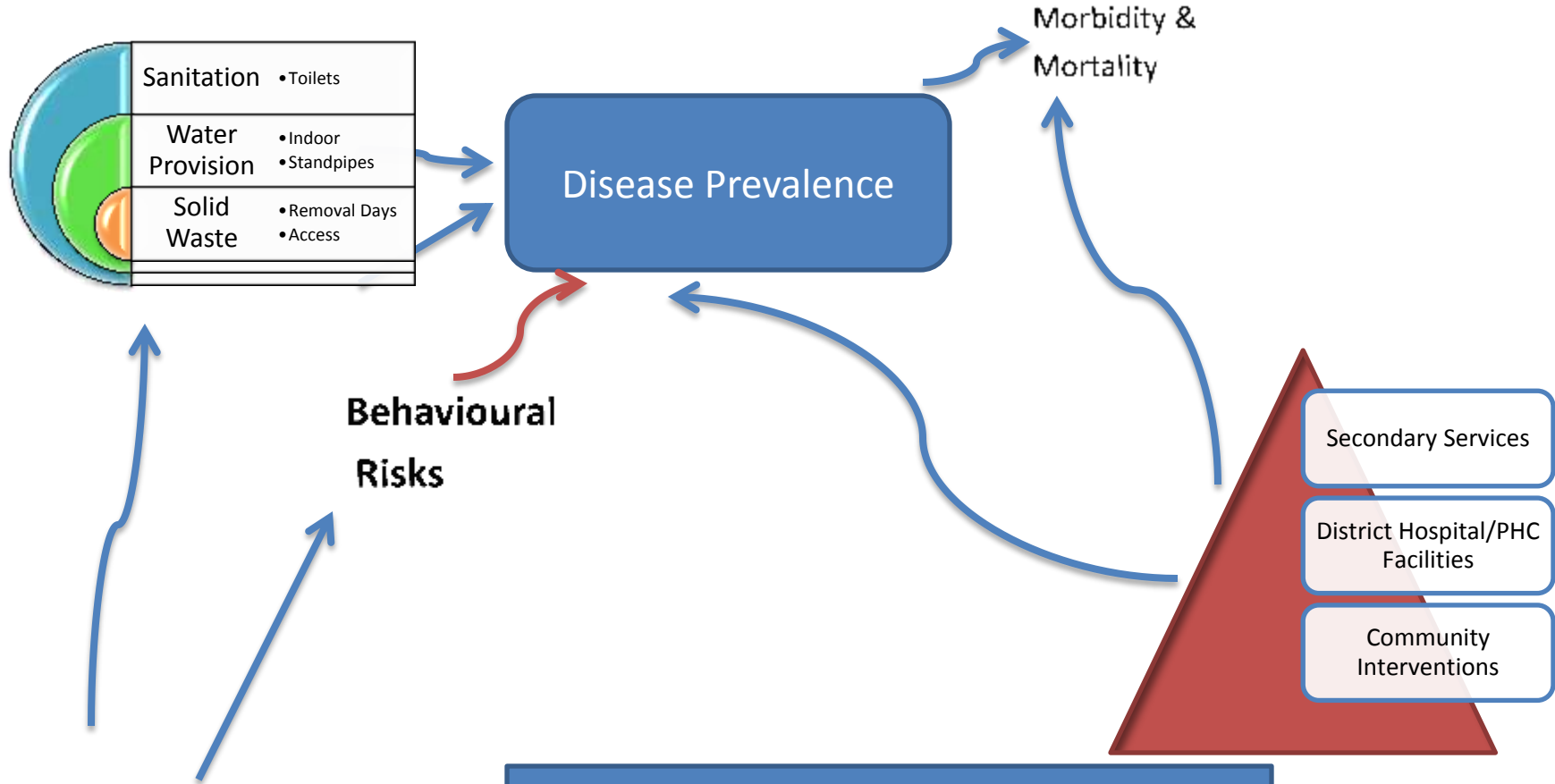
Key Learnings (2)

- ▶ Strengthening of services at “Lower Levels” is dependent on support from “Higher Levels” e.g. training of PHC;
 - ▶ The above also leads to better coordination across the system through improved communication;
 - ▶ The consistent support by senior management is a key reason for sustainability and therefore more “vigilance” shown at decentralized level.
- 

Key Learnings (3)

- ▶ The value of the Information System and its ability to focus on relevant activities needs to be emphasized;
 - ▶ Coordination at local level proven to be critical: cross-fertilization and intersectoral action formed the core part of the 2011 activities;
 - ▶ The involvement of EHPs brought in a new dimension/scale and added significant value;
 - ▶ That involvement facilitated and increased EHPs influence in informal settlements service delivery departments
 - ▶ Community involvement at large scale critical to improvements.
- 

Map of Health System Dynamics



Thank You!