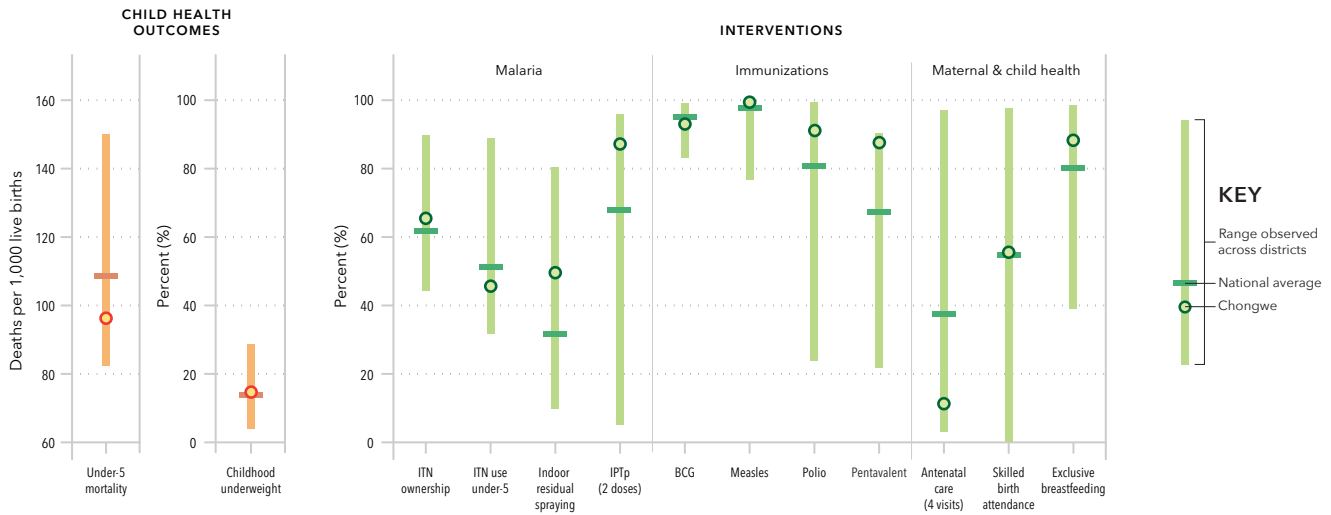


Lusaka province



Chongwe



Note: Levels of child health outcomes and intervention coverage are for 2010. Better performance is reflected by lower levels of child health outcomes (orange) and higher levels of intervention coverage (green).

SUMMARY

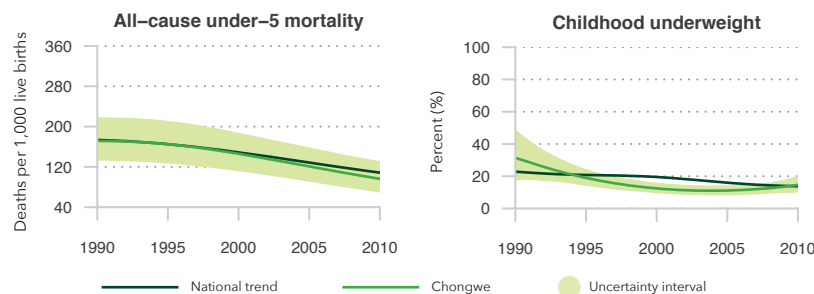
Overall, all-cause under-5 mortality and childhood underweight substantially declined in Chongwe from 1990 to 2010; however, underweight actually increased between 2007 and 2010. Prioritizing ways to accelerate gains for child health outcomes, especially childhood underweight, should be considered.

The district quickly scaled up ITN ownership and IPTp2 through 2010, and rapidly increased coverage of the pentavalent vaccine to very high levels. In 2010, immunization coverage met or exceeded the national average, with Chongwe's measles coverage rising to among the highest in Zambia.

At the same time, coverage of spraying decreased in 2010 and ITN use remained low. Progress in skilled birth attendance was slow, and ANC4 coverage steeply fell, dropping to among the lowest levels in Zambia in 2010. With its low levels of ANC4 in particular, Chongwe will likely benefit from targeting these interventions for improvement.

In 2010, Chongwe met or exceeded national levels for immunizations and malaria interventions (with the exception of ITN use). For maternal and child health interventions, the district had a more mixed performance. In comparison with the national average, Chongwe showed lower levels of mortality and similar levels of underweight.

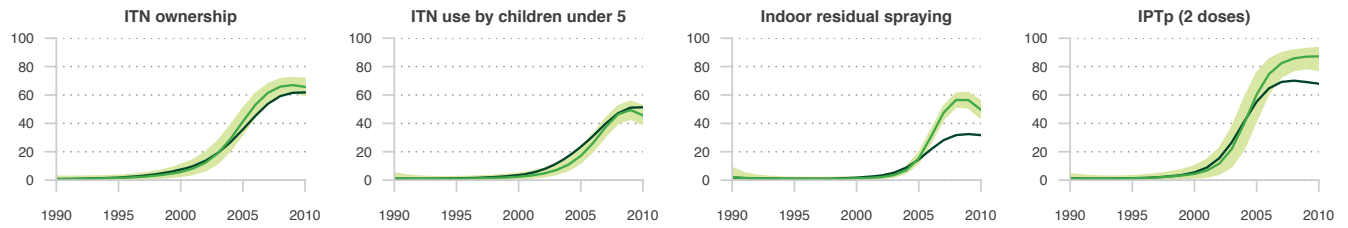
CHILD HEALTH OUTCOMES



From 1990 to 2010, Chongwe recorded a significant reduction in all-cause under-5 mortality, dropping 44% from 172 deaths per 1,000 live births in 1990 (95% CI: 134, 217) to 96 in 2010 (95% CI: 71, 129). In 2010, the district's under-5 mortality was lower than the national average of 109 deaths per 1,000 live births (95% CI: 104, 116).

The proportion of children who were underweight substantially decreased from 31% in 1990 (95% CI: 18%, 48%) to 15% in 2010 (95% CI: 10%, 19%), which was comparable to the national average of 14%. However, it is important to note that underweight increased from the district's low of 11% during the early and mid-2000s.

MALARIA INTERVENTIONS



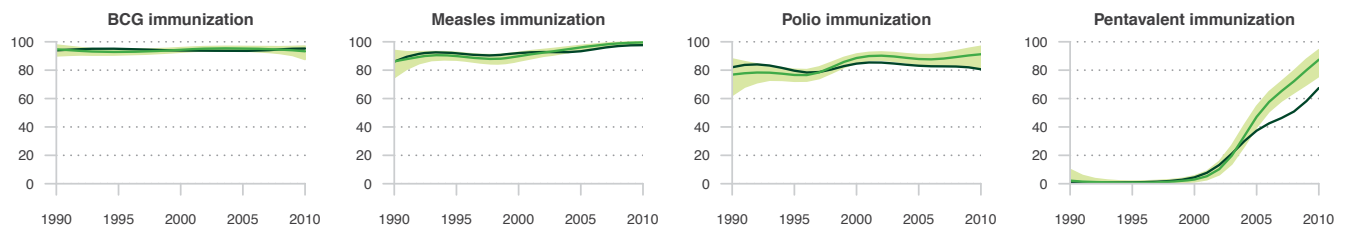
ITN ownership remained below 10% until 2002, after which coverage increased to 67% in 2009 (95% CI: 62%, 72%). Ownership slipped to 66% in 2010 (95% CI: 60%, 72%), but remained higher than the national average of 62%.

The use of ITNs by children under 5 years old increased to 49% in 2009 (95% CI: 43%, 56%), but decreased to 46% in 2010 (95% CI: 39%, 52%), which was lower than the national average of 51%. In 2010, the difference between ITN ownership and use (20 percentage points) was much higher than what was observed at the national level (11 percentage points).

Chongwe formally implemented IRS activities in 2006, and was one of the first 15 districts in Zambia to roll out IRS. IRS coverage increased to 56% in 2008 (95% CI: 52%, 61%) and remained at 56% through 2009, but spraying decreased to 50% in 2010 (95% CI: 44%, 56%).

The proportion of pregnant women who received IPTp2 remained below 10% until 2002, but quickly rose to 60% in 2005 (95% CI: 42%, 76%). Coverage continued to increase but at a slower rate, reaching 87% in 2009 (95% CI: 79%, 93%) and remaining at this level through 2010. This level of IPTp2 coverage far exceeded the national average of 68% for 2010.

IMMUNIZATIONS



BCG coverage never fell below 93% between 1990 and 2010, peaking at 95% from 2001 to 2007 before coming in at 93% in 2010 (95% CI: 88%, 97%). This level of coverage was slightly lower than the national average of 95% for 2010.

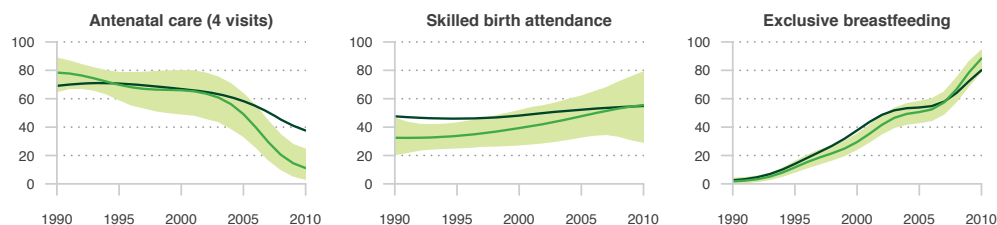
After hovering around 90% between 1990 and 2000, measles immunization rose from 90% in 2000 (95% CI: 86%, 93%) to 100% in 2010 (95% CI: 98%, 100%). This level of coverage was among the highest in Zambia for 2010.

Polio immunization remained below 80% between 1990

and 1997, after which coverage slowly rose to 90% in 2001 (95% CI: 87%, 92%). Polio coverage fell below 90% between 2004 and 2008, but increased to 91% in 2010 (95% CI: 81%, 97%), exceeding the national average of 81%.

After the pentavalent vaccine was formally introduced in Chongwe in 2005, coverage increased to 58% in 2006 (95% CI: 51%, 65%) and 87% in 2010 (95% CI: 76%, 94%), which was among the highest levels in Zambia.

MATERNAL AND CHILD HEALTH INTERVENTIONS



ANC4 coverage steeply fell from 78% in 1990 (95% CI: 65%, 88%) to 11% in 2010 (95% CI: 3%, 24%), which was among the lowest levels in the country. ANC4 dramatically decreased throughout Zambia from 1990 to 2010, and the finding that Chongwe's levels of coverage fell nearly 70 percentage points during that time is particularly worrisome.

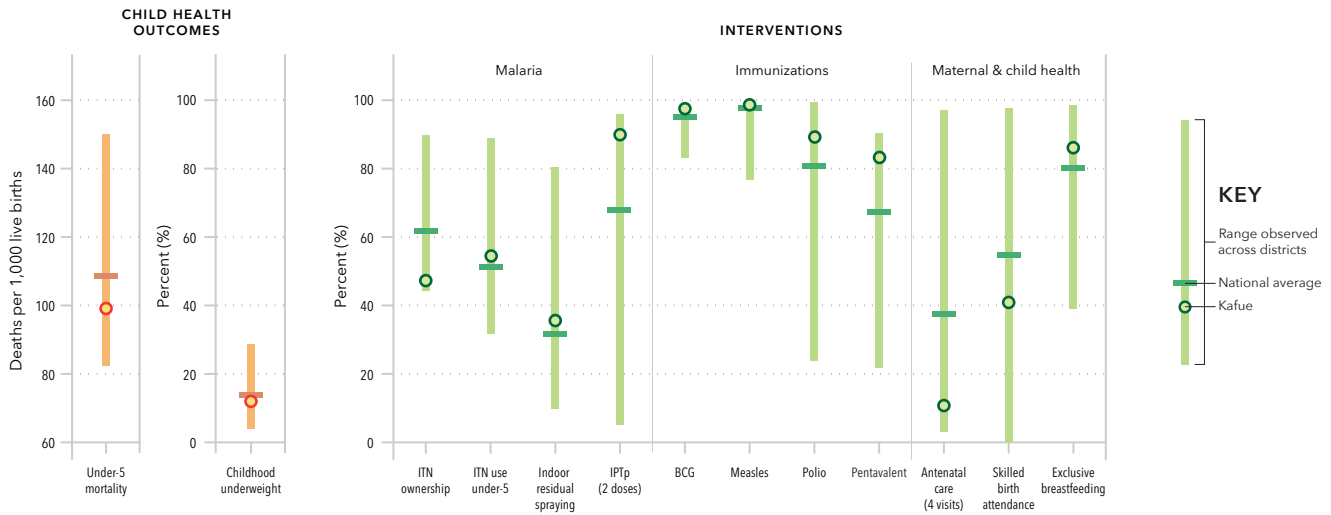
Skilled birth attendance steadily increased from 32% in 1990 (95% CI: 21%, 46%) to 56% in 2010 (95% CI: 30%, 79%).

This level of SBA coverage was comparable to the national average of 55% for 2010, but it remained lower than optimal.

The proportion of children who were exclusively breastfed remained below 20% until 1998, after which coverage rapidly rose to 88% in 2010 (95% CI: 80%, 94%), exceeding the national average of 80%.



Kafue



Note: Levels of child health outcomes and intervention coverage are for 2010. Better performance is reflected by lower levels of child health outcomes (orange) and higher levels of intervention coverage (green).

SUMMARY

Between 1990 and 2010, Kafue experienced substantial reductions in all-cause under-5 mortality and childhood underweight. Given its marked improvement, Kafue should consider ways to maintain these rates of progress in child health outcomes.

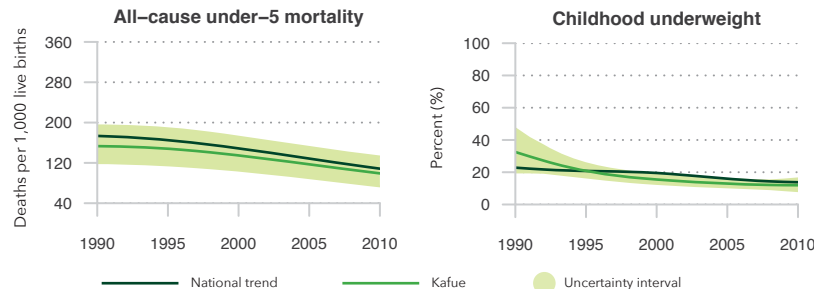
The district was able to rapidly scale up IPTp2 to very high levels through 2010. ITN use exceeded ITN ownership, which suggests that Kafue may have been particularly successful in promoting net use. In 2010, Kafue consistently performed at or above national levels for immunizations, and was able to quickly scale up the pentavalent vaccine to among the highest levels in Zambia in 2010.

However, amidst these gains, some troubling trends were identified and warrant further attention. Coverage of ITNs and

IRS decreased from 2009 to 2010, with ITN ownership falling to among the lowest levels in Zambia. ANC4 coverage and skilled birth attendance steeply fell during the mid- to late 2000s. With its low levels of ANC4 in particular, Kafue will likely benefit from targeting these interventions for improvement.

In 2010, Kafue generally exceeded national levels for immunizations and malaria interventions (ITN ownership was the stark exception), but fell below for maternal and child health interventions (with the exception of exclusive breastfeeding). In comparison with the national average, Kafue showed much lower levels of mortality and slightly lower levels of underweight.

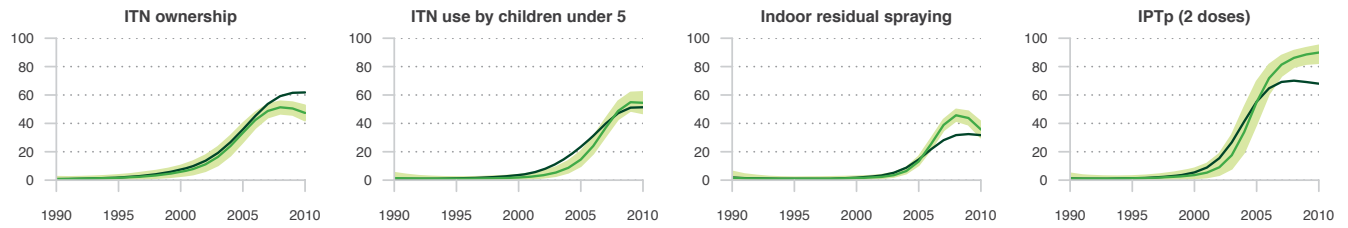
CHILD HEALTH OUTCOMES



From 1990 to 2010, Kafue recorded a significant reduction in all-cause under-5 mortality, dropping 35% from 153 deaths per 1,000 live births in 1990 (95% CI: 120, 194) to 99 in 2010 (95% CI: 73, 133). In 2010, the district's under-5 mortality was well below than the national average of 109 deaths per 1,000 live births (95% CI: 104, 116).

The proportion of children who were underweight substantially declined from 33% in 1990 (95% CI: 20%, 47%) to 12% in 2007 (95% CI: 10%, 15%), which was then maintained through 2010. This level of underweight was slightly lower than the national average of 14% for 2010.

MALARIA INTERVENTIONS



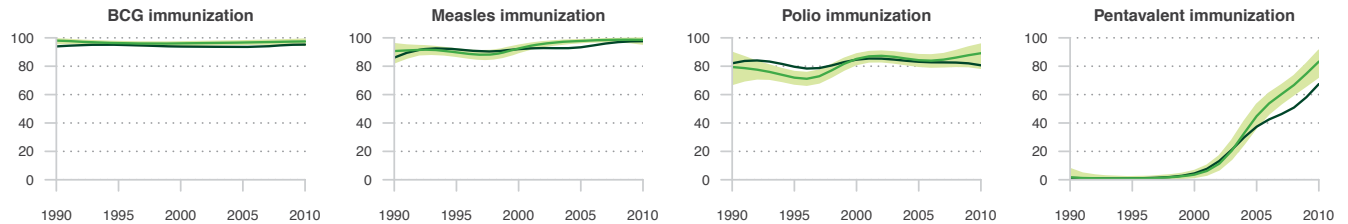
ITN ownership remained below 10% until 2002, after which coverage rapidly increased to 51% in 2008 (95% CI: 47%, 56%). However, ITN ownership declined to 47% in 2010 (95% CI: 42%, 53%), which was among the lowest levels in Zambia.

ITN use by children under 5 years old rapidly increased to 55% in 2009 (95% CI: 49%, 62%), slipping to 54% in 2010 (95% CI: 47%, 62%) but remaining slightly higher than the national average of 51%. In 2010, ITN use exceeded ITN ownership in Kafue, which suggests that net use by children under 5 may be high among households that have ITNs.

Kafue formally implemented IRS activities in 2006, and was one of the first 15 districts in Zambia to roll out IRS. Kafue expanded IRS coverage to 46% in 2008 (95% CI: 42%, 50%), but coverage declined to 36% in 2010 (95% CI: 30%, 41%).

The proportion of pregnant women who received IPTp2 remained below 10% until 2003, after which coverage rapidly increased to 90% in 2010 (95% CI: 82%, 95%), rising to among the highest levels in Zambia.

IMMUNIZATIONS



BCG coverage remained above 96% from 1990 to 2010, peaking at 98% in the early 1990s. Coverage was maintained at 97% from 2003 to 2010, which was slightly higher than the national average of 95% for 2010.

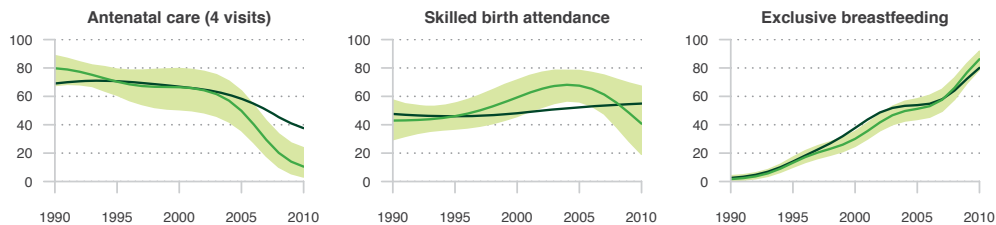
Measles immunization hovered around 90% from 1990 to 1999, but then increased to 99% in 2008 (95% CI: 97%, 99%) and remained at this level of coverage through 2010, slightly exceeding the national average of 98%.

Coverage of polio immunization remained below 80% be-

tween 1990 and 1998, but then gradually increased to 89% in 2010 (95% CI: 79%, 95%), rising above the national average of 81%.

After the pentavalent vaccine was formally introduced in Kafue in 2005, coverage increased to 54% in 2006 (95% CI: 47%, 61%) and 83% in 2010 (95% CI: 73%, 91%). Kafue achieved a much higher level of coverage than the national average of 67% for 2010, and had one of the highest levels of pentavalent coverage in Zambia.

MATERNAL AND CHILD HEALTH INTERVENTIONS



ANC4 coverage decreased from 80% in 1990 (95% CI: 68%, 89%) to 10% in 2010 (95% CI: 3%, 24%), which was well below the national average of 37% for 2010 and among the lowest in Zambia for that year. ANC4 dramatically decreased throughout Zambia from 1990 to 2010, and the finding that Kafue's levels of coverage fell 70 percentage points during that time is particularly worrisome.

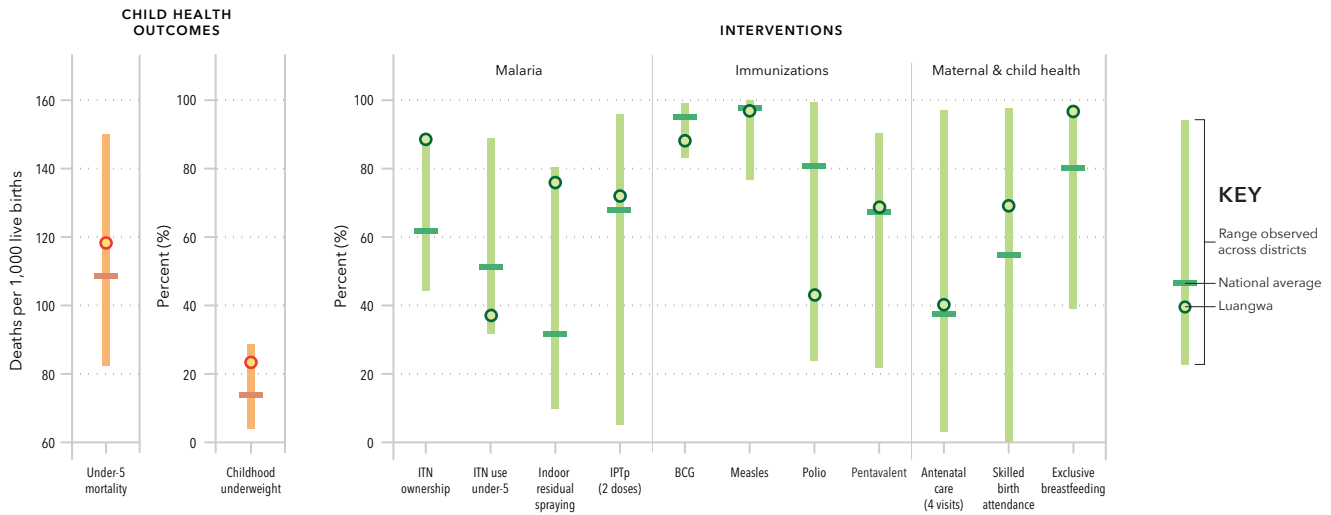
Skilled birth attendance increased from 43% in 1990 (95% CI: 30%, 57%) to 68% in 2004 (95% CI: 57%, 78%) before de-

creasing to 41% in 2010 (95% CI: 19%, 67%), which was below the national average of 55%. This decline is cause for concern given that Kafue brought up SBA coverage above the national average between 2001 and 2006.

The proportion of children who were exclusively breastfed remained below 20% until 1997, after which coverage rapidly to 86% in 2010 (95% CI: 79%, 92%), exceeding the national average of 80% for that year.



Luangwa



Note: Levels of child health outcomes and intervention coverage are for 2010. Better performance is reflected by lower levels of child health outcomes (orange) and higher levels of intervention coverage (green).

SUMMARY

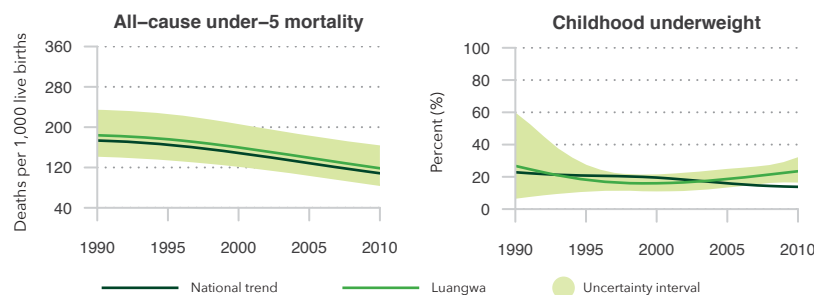
All-cause under-5 mortality substantially decreased in Luangwa between 1990 and 2010, but its levels in 2010 still exceeded the national average. Minimal progress was made in reducing childhood underweight, with levels rising in the 2000s to among the highest in Zambia for 2010. Prioritizing efforts to accelerate gains for child health outcomes should be considered.

The district was able to rapidly scale up ITNs, IRS, and IPTp2 through 2010. Luangwa achieved some of the highest rates of exclusive breastfeeding in the country for 2010. Pentavalent coverage reached the national average in 2010, and high levels of measles coverage were maintained.

However, amidst these gains, several troubling trends were identified and warrant further attention. ITN use remained very low, which starkly contrasts with the district's high levels of ITN ownership. BCG and polio immunization fell among the lowest levels in Zambia for 2010, and perhaps most alarmingly, ANC4 steeply declined after coverage had increased to high levels during the 1990s.

In 2010, Luangwa generally exceeded national levels for maternal and child health interventions and malaria interventions, with the clear exception of ITN use. For immunizations, the district had a more mixed performance. In comparison with the national average, Luangwa showed higher levels of mortality and underweight.

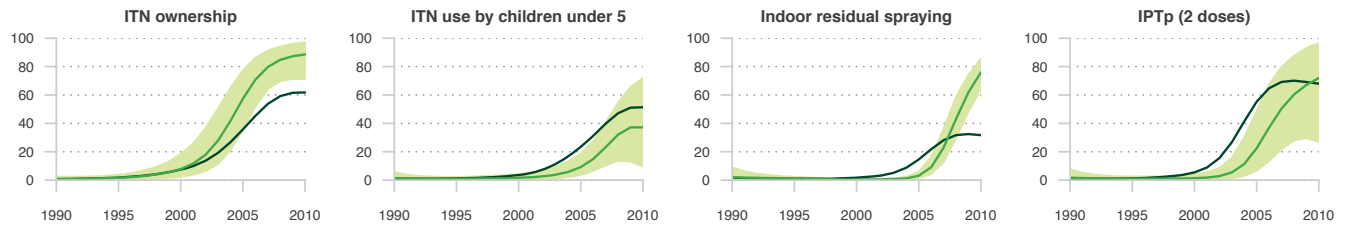
CHILD HEALTH OUTCOMES



From 1990 to 2010, Luangwa recorded a significant reduction in all-cause under-5 mortality, dropping 36% from 184 deaths per 1,000 live births in 1990 (95% CI: 143, 233) to 118 in 2010 (95% CI: 85, 162). In 2010, the district's under-5 mortality remained higher than the national average of 109 deaths per 1,000 live births (95% CI: 104, 116).

The proportion of children who were underweight declined from 27% in 1990 (95% CI: 7%, 59%) to 23% in 2010 (95% CI: 17%, 32%), which was among the highest levels in Zambia. Further, childhood underweight actually increased between 1999 and 2010, from a low of 16% in 1998 (95% CI: 12%, 21%). This trend is cause for concern and warrants further attention.

MALARIA INTERVENTIONS



ITN ownership remained below 10% until 2001, after which coverage increased rapidly to 89% in 2010 (95% CI: 71%, 97%), rising to among the highest levels in Zambia.

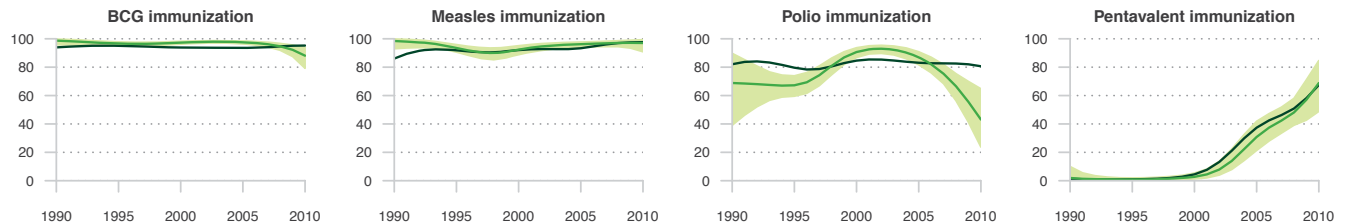
ITN use by children under 5 years old increased to 37% in 2009 (95% CI: 13%, 66%) and remained at this level through 2010, among the lowest in Zambia. This very low level of ITN use was in stark contrast with the district's high levels of ownership. The difference between ITN ownership and use (52 percentage points) was much higher than what was observed nationally (11 percentage points), which suggests that the dis-

trict's net use culture may be minimal.

Luangwa formally implemented IRS activities in 2010, and reached 76% of households that year (95% CI: 64%, 86%). This level of IRS coverage was among the highest in Zambia for 2010, irrespective of IRS start year.

The proportion of pregnant women who received IPTp2 remained below 10% until 2004, but rapidly rose to 50% in 2007 (95% CI: 22%, 80%). Coverage continued to rise but at a slower rate, reaching 72% in 2010 (95% CI: 27%, 96%) and slightly exceeding the national average of 68%.

IMMUNIZATIONS



BCG coverage remained above 96% from 1990 to 2006, but steadily decreased to 88% in 2010 (95% CI: 79%, 94%). This level of BCG immunization was among the lowest in Zambia for that year.

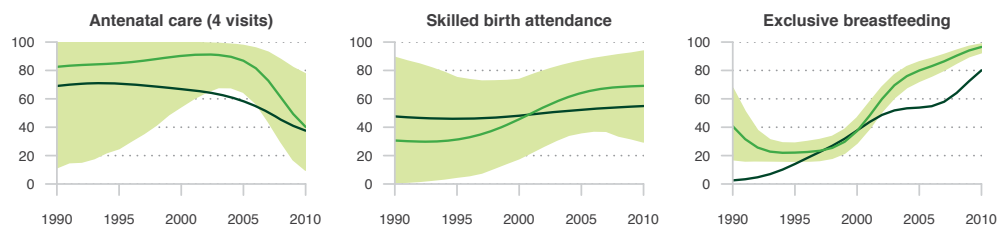
After declines in the 1990s, measles immunization increased to 97% in 2006 (95% CI: 94%, 98%) and remained at this level through 2010, only slightly below the national average of 98%.

Coverage of polio immunization varied in the 1990s, remaining below 70% from 1990 to 1996 before rising to 93%

in 2001 and 2002. Polio coverage then declined, dropping to 43% in 2010 (95% CI: 24%, 65%) and falling to among the lowest levels in the country. This steep decrease in polio immunization is particularly surprising given that coverage was above the national average during the early 2000s.

After the pentavalent vaccine was formally introduced in Luangwa in 2005, coverage increased to 37% in 2006 (95% CI: 28%, 47%) and 69% in 2010 (95% CI: 49%, 85%), which was slightly higher than the national average of 67%.

MATERNAL AND CHILD HEALTH INTERVENTIONS



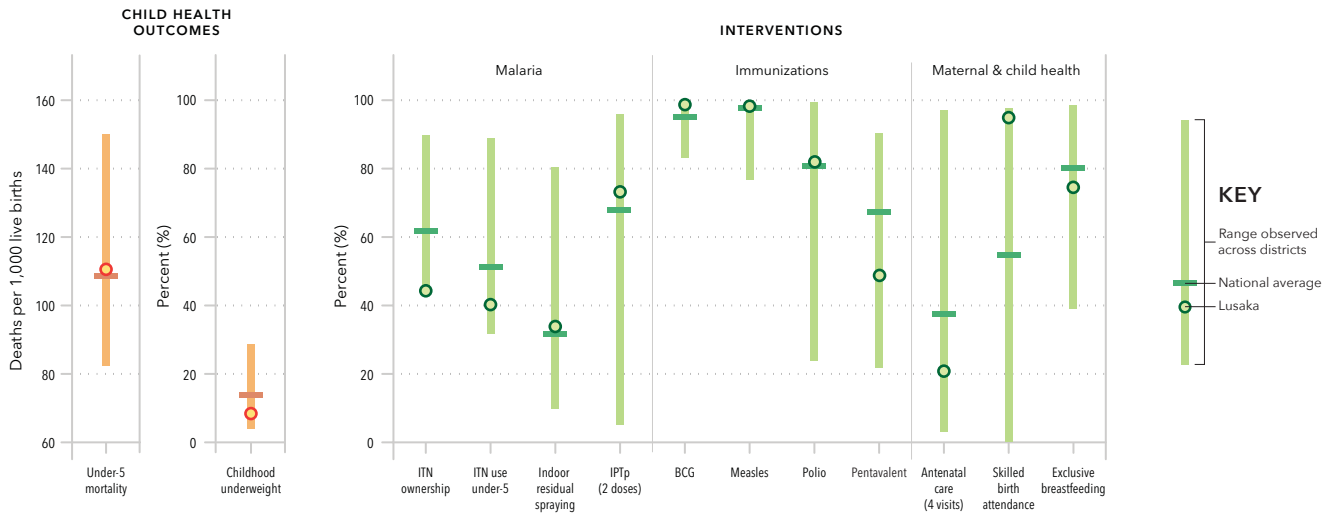
ANC4 coverage increased from 83% in 1990 (95% CI: 12%, 100%) to 91% in 2001 (95% CI: 60%, 99%), but rapidly decreased to 40% in 2010 (95% CI: 10%, 77%). Although this level of ANC4 was slightly higher than the national average of 37% in 2010, the finding that ANC4 declined more than 50 percentage points in seven years is worrisome.

Skilled birth attendance slowly increased from 31% in

1990 (95% CI: 1%, 89%) to 69% in 2009 (95% CI: 32%, 92%). This level of coverage was sustained through 2010, exceeding the national average of 55%.

The proportion of children who were exclusively breastfed dropped from 41% in 1990 (95% CI: 17%, 67%) to below 30% until 1999, after which coverage increased to 97% in 2010 (95% CI: 93%, 99%), one of the highest levels in Zambia for that year.

Lusaka



Note: Levels of child health outcomes and intervention coverage are for 2010. Better performance is reflected by lower levels of child health outcomes (orange) and higher levels of intervention coverage (green).

SUMMARY

All-cause under-5 mortality moderately decreased in Lusaka from 1990 to 2010. Childhood underweight was halved between 2001 and 2010, falling to some of the lowest levels in Zambia in 2010. Prioritizing ways to accelerate declines in under-5 mortality should be considered.

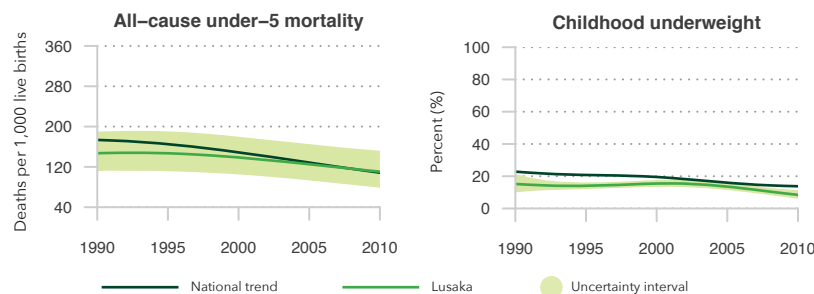
Lusaka achieved high levels of IPTp2, and further increased its previously high levels of skilled birth attendance. The district maintained high coverage for most routine immunizations, with its levels of BCG becoming some of the highest in Zambia for 2010.

However, amidst these gains, some troubling trends were identified and warrant further attention. In comparison with the

rest of Zambia, Lusaka's scale-up of ITNs was quite low. IRS coverage fell from its peak in 2008, and the district's level of pentavalent coverage was among the lowest in the country for 2010. Alarming, ANC4 coverage dramatically fell in recent years.

In 2010, Lusaka met or exceeded national levels for immunizations (with pentavalent coverage as the stark exception), but fell below for maternal and child health interventions (with the exception of the district's high levels of skilled birth attendance). For malaria interventions, the district had a more mixed performance. In comparison with the national average, Lusaka showed similar levels of mortality and much lower levels of underweight.

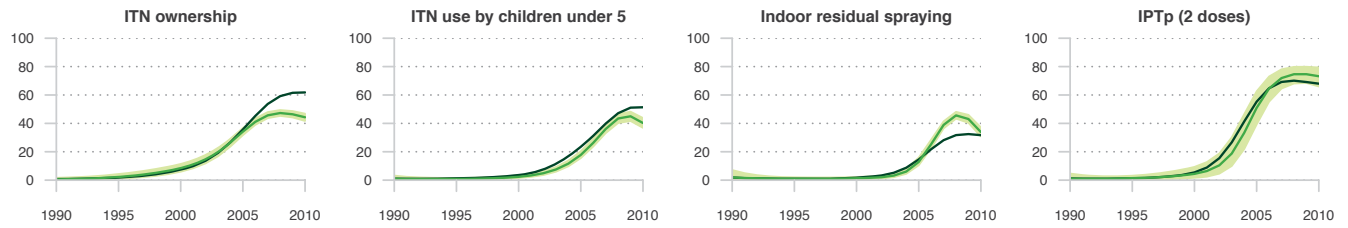
CHILD HEALTH OUTCOMES



From 1990 to 2010, Lusaka recorded a reduction in all-cause under-5 mortality, dropping 25% from 147 deaths per 1,000 live births in 1990 (95% CI: 114, 188) to 111 in 2010 (95% CI: 81, 150); however, this decline was not statistically significant. In 2010, the district's under-5 mortality was comparable to the national average of 109 deaths per 1,000 live births (95% CI: 104, 116).

During the 1990s, the proportion of children who were underweight remained relatively unchanged. After 2000, however, underweight decreased from 16% in 2001 (95% CI: 14%, 17%) to 8% in 2010 (95% CI: 7%, 11%), falling well below the national average of 14%. This level of childhood underweight was among the lowest in Zambia for 2010.

MALARIA INTERVENTIONS



ITN ownership remained below 10% until 2001, after which coverage rose to 47% in 2008 (95% CI: 45%, 49%). ITN ownership slightly declined to 44% in 2010 (95% CI: 42%, 47%), which was among the lowest in Zambia for that year.

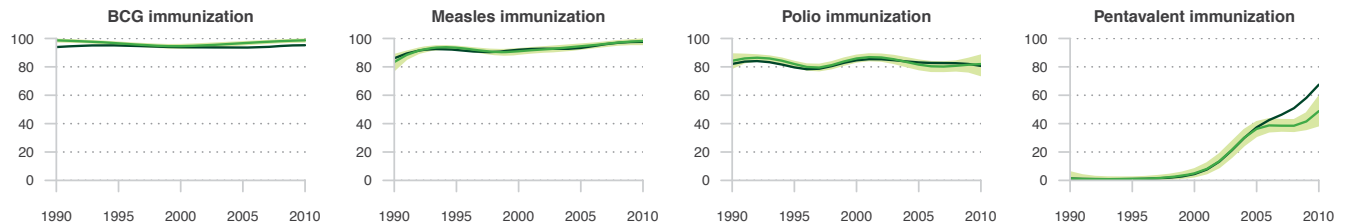
ITN use by children under 5 years old increased to 45% in 2009 (95% CI: 42%, 48%), but dropped slightly to 40% in 2010 (95% CI: 37%, 44%), falling well below the national average of 51% and among the lowest in the country for that year. However, in 2010, the difference between ITN ownership and ITN use was quite low in Lusaka, which suggests that net use by children

under 5 may be high among households that have ITNs.

Lusaka formally implemented IRS activities in 2003, and was one of the first 15 districts in Zambia to roll out IRS. Coverage peaked at 46% in 2008 (95% CI: 43%, 48%), and fell to 34% in 2010 (95% CI: 31%, 37%).

The proportion of pregnant women who received IPTp2 remained below 10% until 2002, but rapidly increased to 75% in 2009 (95% CI: 68%, 80%). IPTp2 coverage fell slightly to 73% in 2010 (95% CI: 66%, 79%) but still exceeded the national average of 68%.

IMMUNIZATIONS



BCG coverage was consistently at or above 95% from 1990 to 2010, only decreasing to 95% from 1997 to 2002 before rising to 99% in 2010 (95% CI: 98%, 99%). This level of BCG coverage was among the highest in Zambia for 2010.

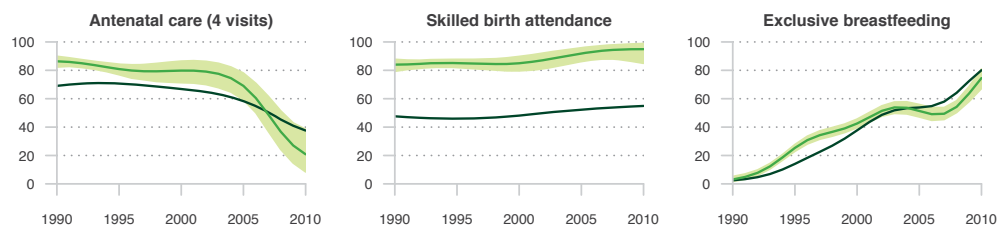
After exceeding 90% coverage in 1992, measles immunization in Lusaka largely stagnated between 90% and 94% from 1992 to 2005. In 2006, coverage began to increase gradually, reaching 98% in 2010 (95% CI: 96%, 99%) and equaling the national average for 2010.

Polio immunization fell from 86% in the early 1990s to 80%

in 1996 (95% CI: 78%, 82%) before rising to 87% in the early 2000s. Coverage declined again, dropping to 80% in 2006 (95% CI: 77%, 84%), but increased to 82% in 2010 (95% CI: 74%, 88%). Lusaka's level of polio coverage in 2010 was comparable to the national average of 81%.

After the pentavalent vaccine was formally introduced in Lusaka in 2005, coverage hovered around 39% through 2008 and then increased to 49% in 2010 (95% CI: 39%, 59%), which was among the lowest in Zambia. The district's marginal scale-up of the pentavalent vaccine is cause for concern.

MATERNAL AND CHILD HEALTH INTERVENTIONS



ANC4 coverage remained between 78% and 86% from 1990 to 2003, but declined to 21% in 2010 (95% CI: 8%, 38%), falling below the national average of 37%. ANC4 dramatically decreased throughout Zambia from 1990 to 2010, and the finding that Lusaka's levels of coverage fell 65 percentage points during this time is troubling.

Skilled birth attendance increased from 84% in 1990 (95% CI: 79%, 88%) to 95% in 2010 (95% CI: 85%, 99%), which was

among the highest levels of coverage in Zambia for 2010.

The proportion of children who were exclusively breastfed remained below 20% until 1995, after which coverage rose to 54% in 2003 and 2004. Coverage dropped below 50% between 2006 and 2007 before increasing to 75% in 2010 (95% CI: 67%, 81%), which was lower than the national average of 80% for that year.