

8 Reproductive Health

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This chapter covers two indicators related to reproductive health, namely 'couple year protection rate' and 'cervical screening coverage'.

8.1 Couple year protection rate

The couple year protection rate (CYPR) indicator measures the percentage of women aged from 15 to 49 years who are protected against unplanned pregnancies for a year using modern contraceptive methods, including sterilisation. The volume of all contraceptives dispensed to clients during a specified period of time (a year) is used to estimate the amount of protection against pregnancy during that particular period. This estimate of protection is called the 'contraceptive year equivalent'. This forms the numerator for the CYPR indicator. Each type of contraceptive method that is distributed is adjusted by a conversion factor (country-specific)^a to yield an estimate of the duration of contraceptive protection. In South Africa (SA), it is calculated automatically in the District Health Information Software (DHIS) as follows:

- ◆ Oral pill cycle divided by a factor of 13 (one pack lasts 28 days = 13 per year)
- ◆ Medroxyprogesterone injection divided by a factor of 4 (administered every three months)
- ◆ Norethisterone enanthate injection divided by a factor of 6 (administered every two months)
- ◆ Intrauterine contraceptive device (IUCD) inserted multiplied by a factor of 4 (estimated to provide effective contraception for four years)
- ◆ Male condoms distributed divided by a factor of 200 (estimated that they are used 200 times per year)
- ◆ Female condoms distributed divided by a factor of 200 (estimated that they are used 200 times per year)
- ◆ Male sterilisation multiplied by a factor of 20 (estimated number of years of protection against pregnancy post-procedure based on median age at sterilisation)
- ◆ Female sterilisation multiplied by a factor of 10 (estimated number of years of protection against pregnancy post-procedure based on median age at sterilisation)
- ◆ Sub-dermal implants multiplied by a factor of 3 (estimated to provide effective contraception for three years)

Female condoms and sub-dermal implants are new additions to the calculation in 2014/15. Initially it was said that the sub-dermal implant would only be used in the calculation of this indicator from 2015/16, but it has already been included. Not all provinces reported on sub-dermal implants, as is discussed later. The provinces that reported on sub-dermal implants and female condoms distributed are Gauteng (GP), KwaZulu-Natal (KZN), Limpopo (LP) and Northern Cape (NC).

The denominator for the CYPR is the 'female target population 15–49 years', where females are used as a proxy for couples. The numerator ('contraceptive year equivalent') is based on an estimation of the extent to which couples would be protected if only one method was used per couple. It does not adjust for methods dispensed but not used (such as condoms or oral pills), removed early (such as IUCDs or sub-dermal implants), or 'dual protection' (the simultaneous use of condoms and hormonal methods). The CYPR is therefore a crude proxy, although it is the best available measure in the absence of regular, disaggregated survey data.

The number of contraceptive years equivalent increased by 25.8% from 5.55 million in 2013/14 to 6.98 million in 2015/16. As shown in Table 1, this was mainly due to the massive increase in the number of male condoms distributed (an increase of 40.7%). There were declines in the number of IUCDs inserted and also a decline in medroxyprogesterone, norethisterone enanthate and oral contraceptive pills dispensed, probably due to the introduction of the sub-dermal implant and women choosing this newer method. It is less invasive than the IUCD and much more long lasting than the other hormonal methods. Female sterilisations increased slightly, and the number of male sterilisations declined.

^a MEASURE Evaluation PRH: Family planning and reproductive health indicators database. Couple-years of protection (CYP). Available at: http://www.cpc.unc.edu/measure/prh/rh_indicators/specific/fp/cyp [accessed on 12 August 2015].

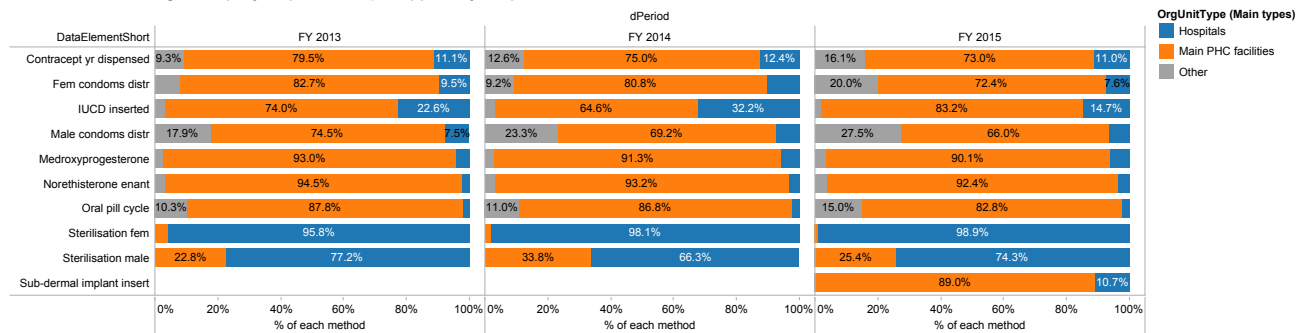
Table 1: Contraception data elements comparing 2013/14 and 2014/15

Data element	2013/14	2014/15	% change
Contraceptive years equivalent	5 550 663	6 980 735	25.8
Female condoms distributed	13 254 328	21 099 517	59.2
IUCD inserted	41 817	39 168	-6.3
Male condoms distributed	506 431 299	712 387 234	40.7
Medroxyprogesterone	5 762 721	5 510 430	-4.4
Norethisterone enanthate	4 277 194	3 834 005	-10.4
Oral pill cycle	3 815 539	3 560 421	-6.7
Sterilisation female	31 551	32 074	1.7
Sterilisation male	1 120	877	-21.7
Sub-dermal implant inserted	0	175 948	100

As shown in Figure 1, the majority of contraceptive methods (73%) are dispensed at primary health care (PHC) facilities, with the exception of the surgical procedures.

Figure 1: Data elements relating to couple year protection, % supplied by hospitals, main PHC facilities and other facilities, 2012/13–2014/15

Data elements relating to couple year protection (% supplied by hospitals, main PHC facilities and other facilities)



* 'Other' includes all other facility types not clearly hospitals, clinics, community health centres or mobile units.

Table 2 compares contraceptive methods by facility type over the past three years. The medroxyprogesterone injection, which is administered intramuscularly, is currently the most used hormonal contraceptive among South African women and contributes the most contraceptive years after male condoms. Although past use of medroxyprogesterone and norethisterone was increasing, fewer doses were administered in 2014/15 than in previous years. Table 3 shows the contribution of the different facility types to the contraceptive year equivalent.

Table 2: Methods of contraception analysed by facility type 2012/13 to 2014/15

Data element	Year	Facility type			Grand total
		Hospitals	Main PHC facilities	Other	
Female condoms distributed (N)	2012/13	838 785	7 310 816	691 172	8 840 773
	2013/14	1 323 337	10 714 517	1 216 474	13 254 328
	2014/15	1 595 465	15 282 984	4 221 068	21 099 517
IUCD inserted (N)	2012/13	4 051	13 237	608	17 896
	2013/14	13 456	27 018	1 343	41 817
	2014/15	5 754	32 592	822	39 168
Male condoms distributed (N)	2012/13	29 213 718	288 783 524	69 463 557	387 460 799
	2013/14	37 992 451	350 627 661	117 811 187	506 431 299
	2014/15	46 801 575	469 895 456	195 690 203	712 387 234
Medroxyprogesterone (N)	2012/13	242 666	5 247 475	151 975	5 642 116
	2013/14	331 269	5 262 531	168 921	5 762 721
	2014/15	340 458	4 966 752	203 220	5 510 430
Norethisterone enanthate (N)	2012/13	101 361	4 029 552	134 512	4 265 425
	2013/14	144 439	3 987 169	145 586	4 277 194
	2014/15	137 527	3 541 535	154 943	3 834 005

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Data element	Year	Facility type			
		Hospitals	Main PHC facilities	Other	Grand total
Oral pill cycle (N)	2012/13	81 876	3 730 443	435 953	4 248 272
	2013/14	82 906	3 312 228	420 405	3 815 539
	2014/15	78 001	2 948 379	534 041	3 560 421
Sterilisation female (N)	2012/13	26 981	1 184		28 165
	2013/14	30 942	609		31 551
	2014/15	31 709	346	19	32 074
Sterilisation male (N)	2012/13	666	197		863
	2013/14	742	378		1 120
	2014/15	652	223	2	877
Sub-dermal implant insert (N)	2014/15	18 899	156 616	433	175 948

Table 3: Contraceptive years equivalent analysed by facility type and financial year, 2012/13 to 2014/15

Data element	Year	Facility type			
		Hospitals	Main PHC facilities	Other	Grand total
Contraceptive years equivalent (N)	2012/13	529 260	3 783 082	443 722	4 756 064
	2013/14	687 927	4 163 370	699 366	5 550 663
	2014/15	765 861	5 092 761	1 122 113	6 980 735

The number of terminations of pregnancy performed (not included in the CYPR) has decreased slightly (Table 4). Although access to this service is important, continued demand for the service implies that access to contraceptives is lacking for these women.

Table 4: National trends in terminations of pregnancy, 2011/12 to 2014/15

Data element	2011/12	2012/13	2013/14	2014/15
Termination of pregnancy performed (N)	77 693	82 910	90 160	89 126

Although the CYPR in SA remains sub-optimal, it has increased from 26.3% in 2002/03 to 46.8% in 2014/15. The CYPR for SA is below the national target of 55%. The distribution of CYPR by province is shown in Figure 2.

In 2014/15 the CYPR in the Western Cape (WC) was the highest in SA at 60%, followed closely by KwaZulu-Natal at 57.8%, with Limpopo in third position at 49.2%. For the third year running, Gauteng was the lowest at 38.7%, although the rate increased from 25.0% in 2013/14.

The CYPR increased in 46 of the 52 districts (Figure 3 and Map 1), with the top five increases taking place in uMgungundlovu (KZN) (42.2%), John Taolo Gaetsewe (NC) (27.9%), Dr K Kaunda (22.7% (North West (NW)), Manguang (Free State (FS)) (18.4%) and Tshwane (GP) (18.2%).

The districts showing decreases were Eden (WC) (-5.2), Cape Town (WC) (-5.2), RS Mompati (NW) (-3.1), West Coast (WC) (-1.7), Thabo Mofutsanyana (FS) (-1.1) and Ehlanzeni (Mpumalanga (MP)) (-0.2).

The CYPR in uMgungundlovu (KZN) increased from 53.8% in 2012/13 to 110.7% in 2013/14, and to 152.9% in 2014/15, once again making it the district with the highest CYPR in the country (see Figure 4). This is primarily due to the condom distribution (76 million) in this district, mainly by non-medical sites (Umsunduzi, ATTIC, Richmond, Mkhambathini, uMshwathi, Impendle and uMngeni), as well as Imbalenhle Community Health Centre (CHC) and Northdale Hospital. The number of male condoms distributed in this district alone exceeds the provincial condom distribution in all provinces other than Gauteng and the Western Cape.

uMzinyathi (KZN) is now the second best performing district, with Cape Town (WC) moving into third place (from second in 2013/14), and Eden (WC) into fourth (from third last year). All of the six districts in the WC, except West Coast, are within the top 10 performing districts.

The performance in the National Health Insurance (NHI) districts is highly variable, and includes the best and third poorest performing districts in the country, with uMgungundlovu at 152.9% and Pixley ka Seme at 33.0%. The CYPR in Tshwane (GP) improved in the past year from 20.2% to 38.5% and it is no longer the poorest performing district in the country.

Four of the five districts with the highest population of females aged 15–49 years, namely Johannesburg (GP), eThekweni (KZN), Ekurhuleni (GP) and Tshwane (GP), had CYPRs below the national average. Johannesburg is the poorest-performing of the above-mentioned districts. Cape Town (WC) is the only metro with a rate above the national average. The CYPR in these districts needs to be addressed urgently.

The CYPR by socio-economic quintile (SEQ) seems to be fairly even (see Figure 5). When comparing weighted averages, the CYPR is lowest in SEQ1 (42.1%) and highest in SEQ3. The median CYPR is slightly higher in non-metro than metro areas.

Data quality and incomplete reporting continue to be a problem for this indicator. For example, medroxyprogesterone data were not complete for all months for all facilities. Of the 5 193 facilities, 934 had data missing for one or more months. It is unlikely that zero doses were administered in any particular month as this is the most popular contraceptive method used in SA unless stock-outs occurred.

An additional challenge in SA^b is that contraception services are provided predominantly in health facilities that operate largely during office hours and are therefore not user friendly for working people and school-going youth.

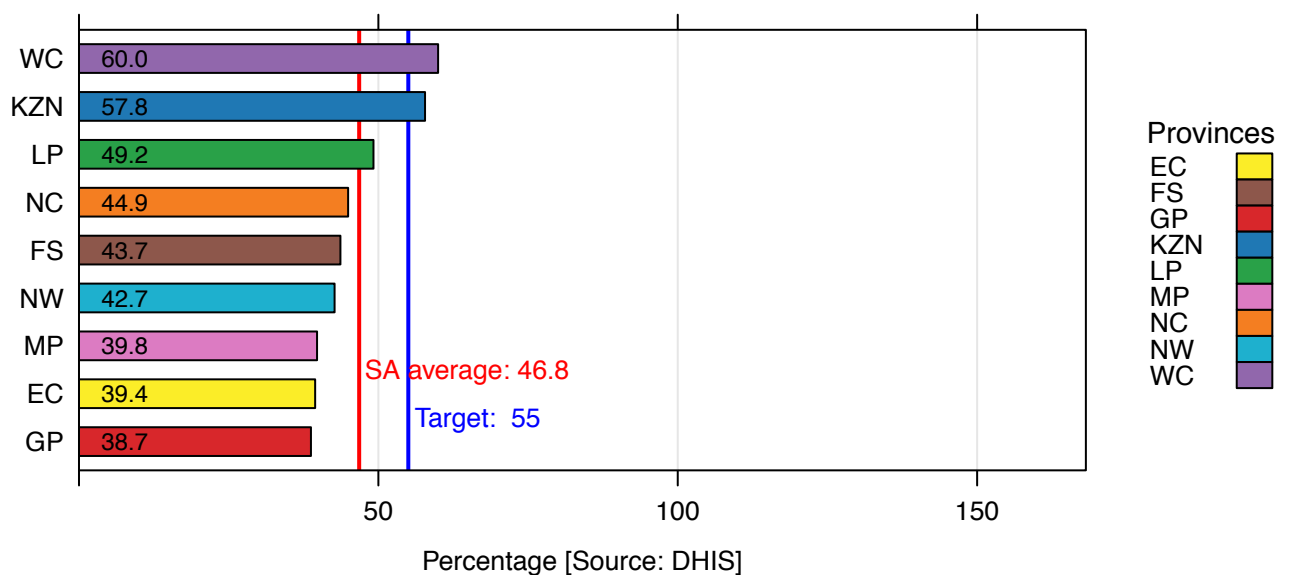
At DHB workshops conducted in 2013 and 2014, poor recordkeeping and poor data quality were mentioned as the main reasons for poor performance for this indicator.

Other reasons for poor performance include:

- ◆ Staff members do not always follow the standard operating instructions for recording of data. Examples include: IUCDs provided by the facility but inserted by general practitioners should be counted by the facility; an oral pill cycle is one packet of oral contraceptives issued; however, these are often issued for three months at a time and sometimes incorrectly recorded as one packet rather than three.
- ◆ Family planning services are not accessible and available at all times.
- ◆ There is a lack of youth-friendly services.
- ◆ School health service staff are not allowed to provide a family planning service at schools.
- ◆ Sterilisation is not promoted as a family planning method and therefore few male and female sterilisations are done.
- ◆ A negative attitude on the part of some staff members deters women from returning to the facilities for their contraception.
- ◆ There are no fast queues for family planning patients. Provision of this service could increase the uptake of family planning methods.

The CYPR is most likely higher than reported for the data quality reasons mentioned above and should increase in 2015/16 once all provinces are reporting on sub-dermal implants. Facilities could continue to focus on promoting long-acting reversible contraception such as the implant and IUCD or sterilisations in order to improve the CYPR in their districts and nationally, together with on-going condom distribution. Urgent attention should be given to data quality issues.

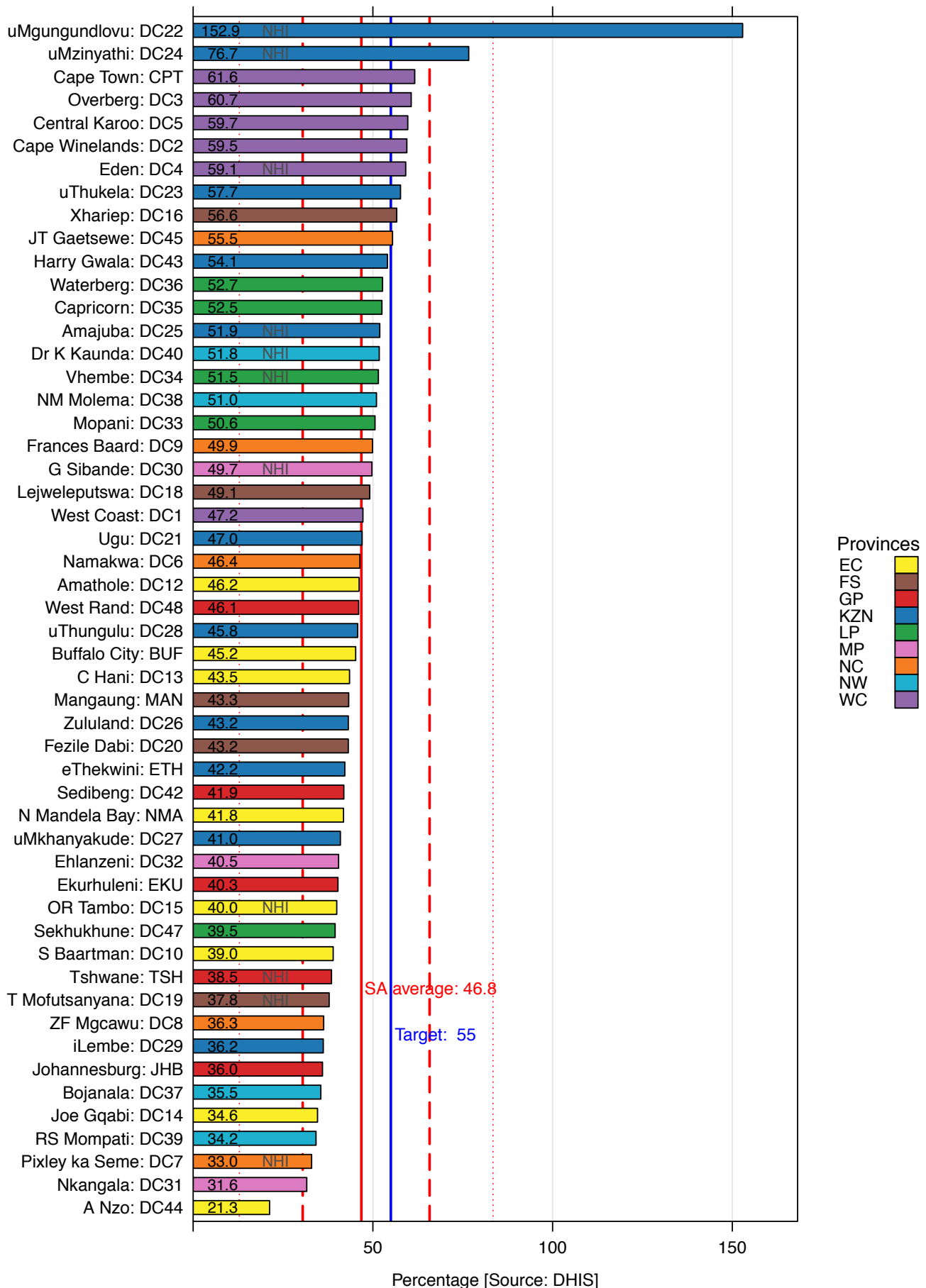
Figure 2: Couple year protection rate by province, 2014/15



^b United Nations Population Fund, UNFPA South Africa. Available at: http://countryoffice.unfpa.org/southafrica/2011/11/24/4255/reproductive_health_and_hiv/ [accessed on 12 August 2015].

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Figure 3: Couple year protection rate by district, 2014/15



Map 1: Couple year protection rate by sub-district, 2014/15

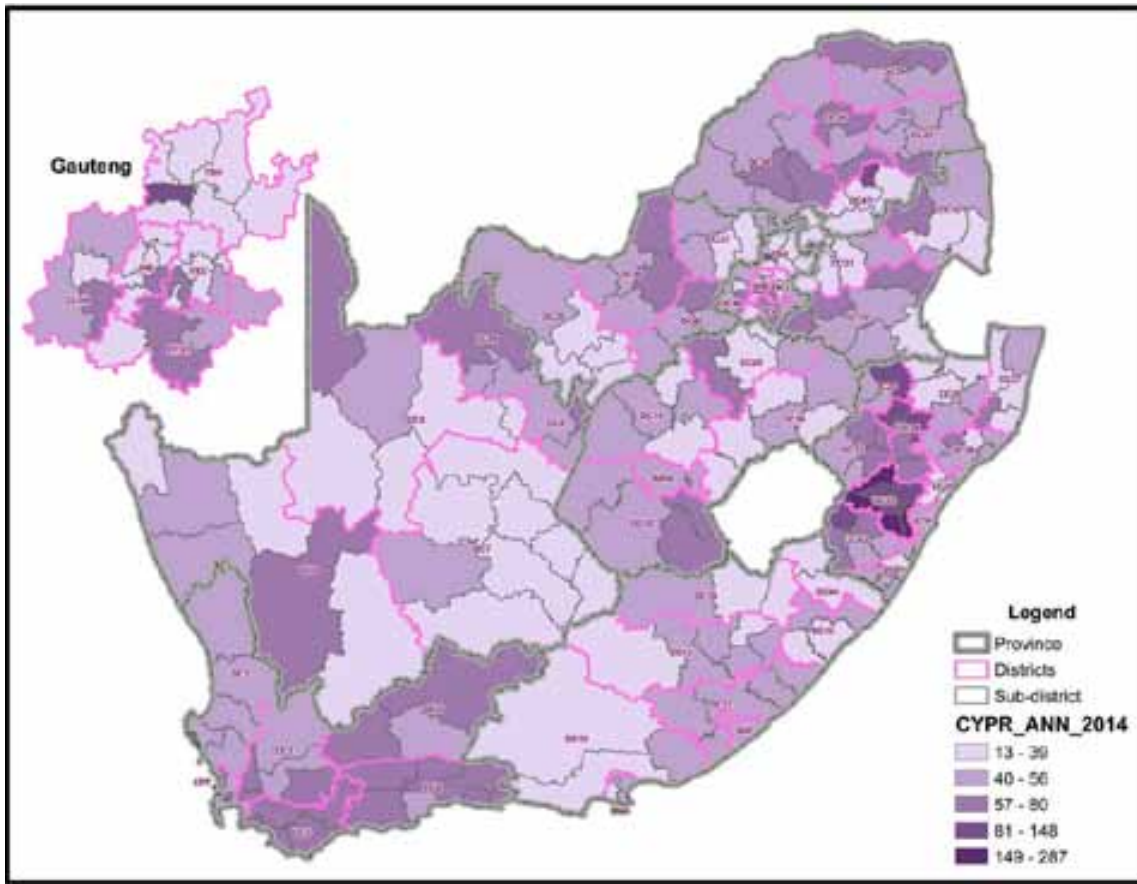


Figure 4: Annual trends: Couple year protection rate

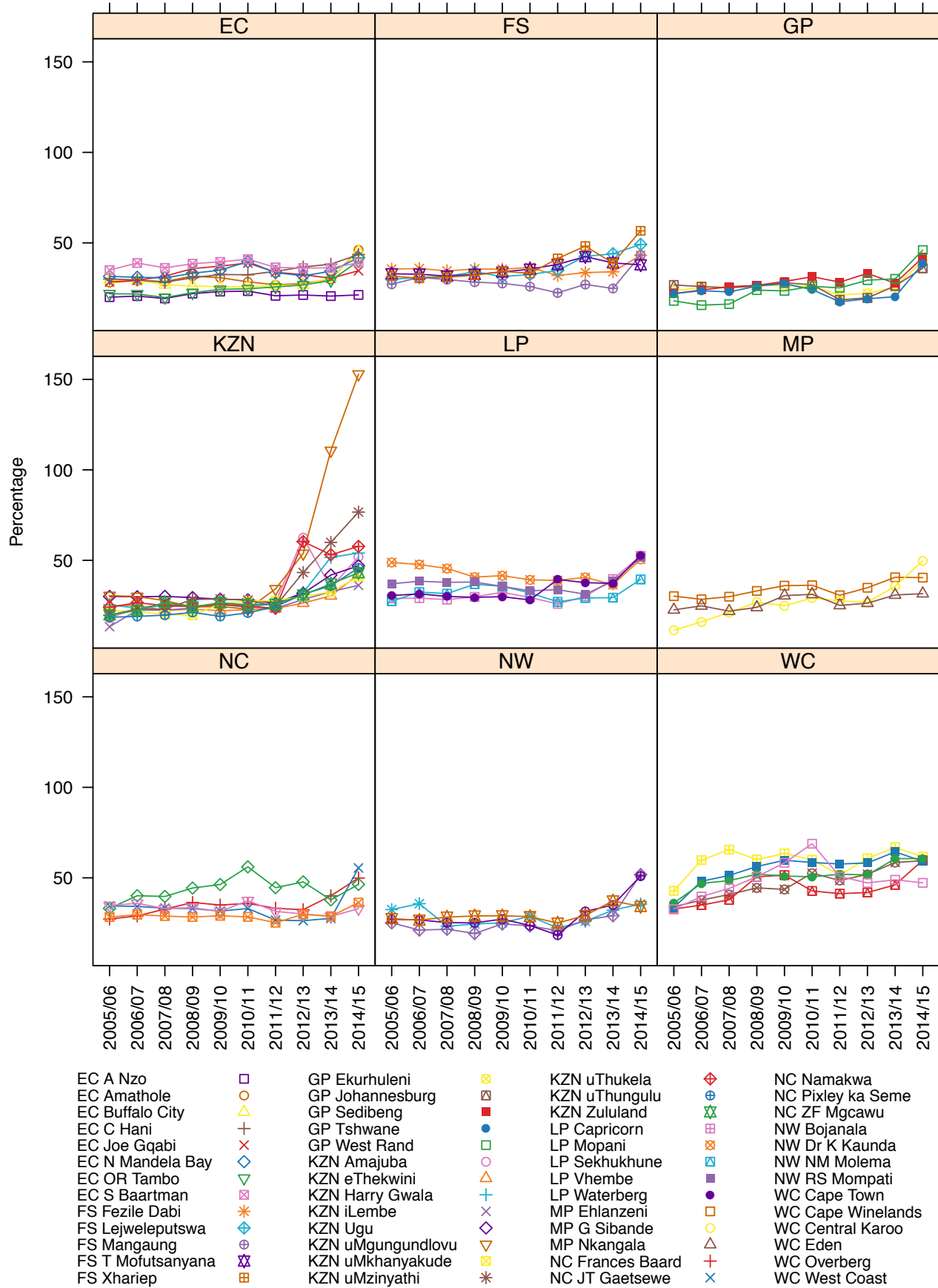
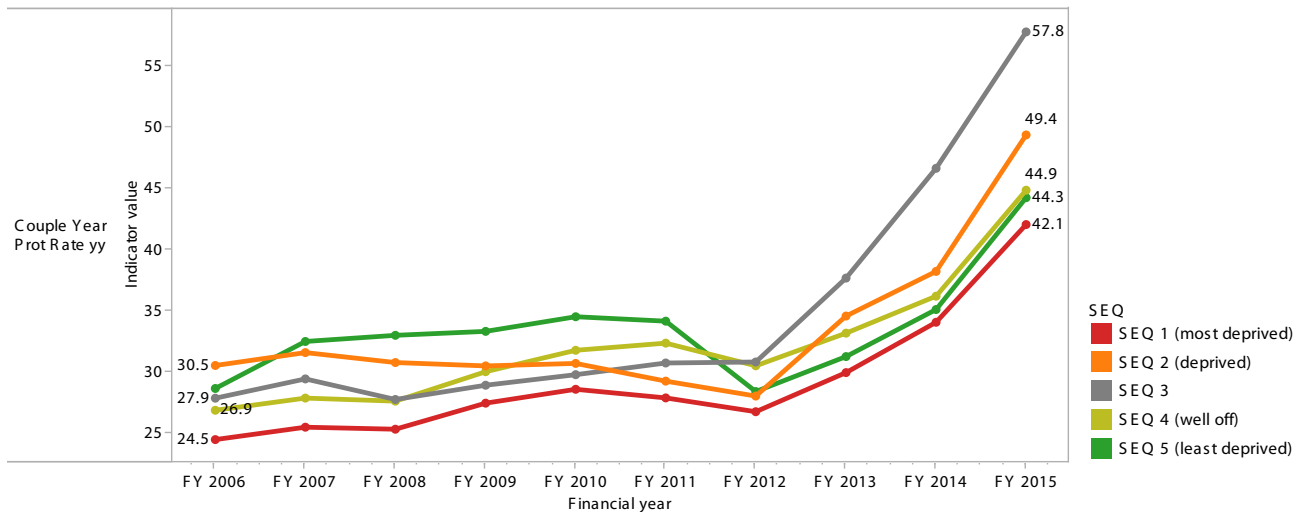


Figure 5: Trends in average district values by SEQ for couple year protection rate



8.2 Cervical cancer screening coverage rate

The cervical cancer screening coverage measures the annual number of cervical smears taken in women 30 years and older as a proportion of the female population 30 years and older, factored for one smear every 10 years. In practice this means that the denominator is 10% of the female population aged 30 years and older. The cervical screening coverage numerator is the number of cervical (pap) smears or visual inspections with acetic acid (VIA) for women 30 years and older for screening purposes. Diagnostic smears or repeat smears are not included. The smear must be of sufficient quality to enable screening to be carried out in the laboratories (i.e. the smears must include endo-cervical cells). The smears include smears done in antenatal clinics or postnatally or for HIV-positive women, but only if they fall within the definition and are counted once within the 10-year interval. Falsely high coverage rates therefore occur if smears are done more than once in 10 years for the same woman; if smears done for women under the age of 30 are included; and if repeat smears and diagnostic smears are included in the numerator.

The denominator is 10% of the female target population 30 years and older. Screening coverage of 100% per year means that every woman in the eligible age group is screened once in 10 years. This is in keeping with the national policy, which states that women should have three cervical smears done at 10-yearly intervals starting at the age of 30 years.

The human papillomavirus (HPV) vaccine was introduced in 2014 and is given in schools to Grade 4 girls (around 9–10 years of age). This HPV vaccine is likely to reduce the incidence of cervical cancer significantly over the next two to three decades as HPV has been implicated as the causative agent in a significant amount of cervical cancer. Since April 2014, the school-based HPV vaccine coverage has reached its target, with excellent coverage of 90%.

Overall, the cervical screening rate in SA was 54.5% in 2014/15, a slight increase from 54.1% in 2013/14. This is lower than the National Department of Health target for cervical cancer screening coverage of 60%.

Although the cervical screening coverage in KwaZulu-Natal is the highest in the country, it has been reducing steadily over the past two years, from 78.2% in 2012/13 to 70.3% in 2014/15. The 2013/14 DHB reported that all provinces with the exception of KwaZulu-Natal showed an increase in cervical screening rates. This year, increases were only noted in the Eastern Cape (EC) (10.3%), Gauteng (1.8%), Mpumalanga (8.4%) and North West (6.2%). The biggest decline was noted in the Free State, where the rate dropped from 51.1% to 40.9%.

KwaZulu-Natal is still the best performing province, with North West remaining second best and the Northern Cape remaining the poorest performing province (Figure 6).

At district level, Amathole (EC) had the highest cervical screening coverage in 2014/15 at 89.5% (Figure 7). The coverage in uMzinyathi (KZN) had been over 100% for several years, but declined by 30.6 percentage points to 71.6%. The total number of smears performed decreased from 10 551 in 2013/14 to 7 554 in 2014/15. Other districts with a large decline are Thabo Mofutsanyana (FS) (decreased by 25.1 percentage points), Central Karoo (WC) (decreased by 22.8 percentage points), Zululand (KZN) (decreased by 17.2 percentage points) and Waterberg (LP) (decreased by 10.6 percentage points).

The most improved districts were Amathole (EC) (increased by 25.2 percentage points), OR Tambo (EC) (increased by 24.6 percentage points), Buffalo City (EC) (increased by 15.9 percentage points), Gert Sibande (MP) (increased by 14.9 percentage points) and NM Molema (NW) (increased by 13.5 percentage points). The poorest-performing district remains Alfred Nzo (EC) where the rate was largely unchanged at 23.1% (Figure 8).

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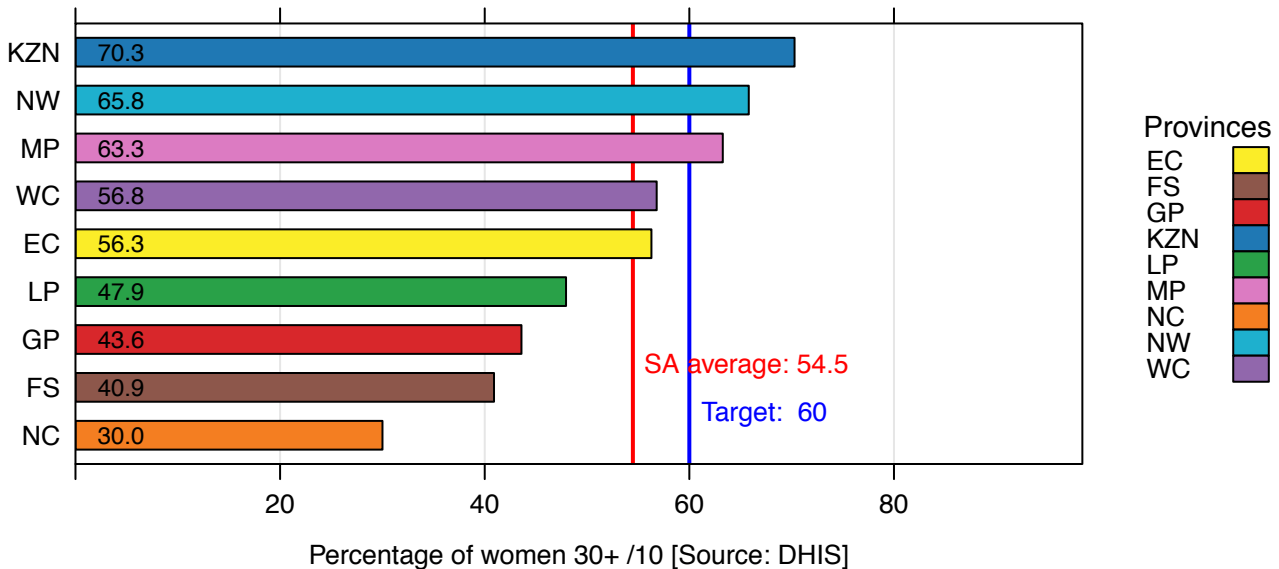
There was considerable variation in the NHI districts, with Eden (WC) now being the best performing NHI district compared with uMzinyathi (KZN) in 2013/14. Pixley ka Seme (NC) is now the worst performing NHI district (26.8%). The screening rate in OR Tambo (EC), which was previously the worst performing NHI district, increased significantly by 24.6 percentage points. The mean cervical screening rate in the NHI districts is higher than in non-NHI districts.

Cervical screening services are now more equitably provided, compared with 10 years ago when virtually no services were provided in the poorest districts (SEQ1). Interestingly, the cervical screening coverage percentage is lowest in the wealthiest districts (SEQs 4 and 5) (see Figure 9).

Participants at DHB workshops conducted in 2014 mentioned that there are many missed opportunities for doing cervical cancer screening. These opportunities include: the service not being offered to women in the target group; staff not eager to do cervical smears; staff inadequately trained; a shortage of professional nurses; and data quality issues concerning smears reportedly done but not reported.

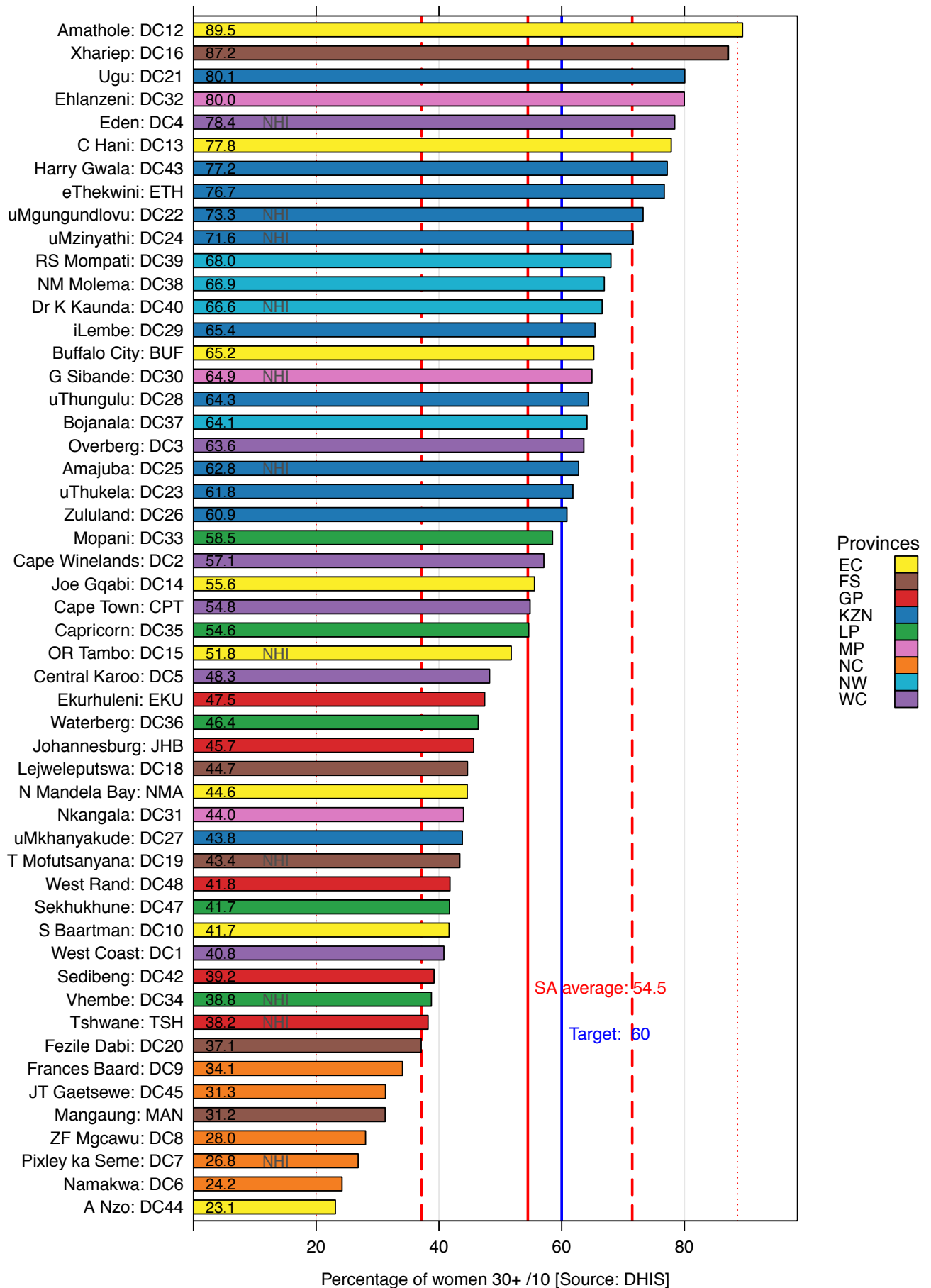
The cervical cancer screening coverage remains inappropriately low and should be addressed urgently as cervical cancer remains the second most commonly occurring cancer in women in SA after breast cancer.^c The impact of the roll out of the HPV vaccine will not be noted for many years. In the interim, focused attention should be paid to performing cervical screening on all eligible women. At each visit to the facility, women could be asked when last they had a pap smear. Pap smear drives could be considered to improve cervical cancer screening in particular areas.

Figure 6: Cervical cancer screening coverage by province, 2014/15



^c WHO/ICO Information Centre on HPV and Cancer (HPV Information Centre). Human papillomavirus and related cancers in South Africa. Summary report 2010. Available from: <http://www.hpvcentre.net/statistics/reports/ZAF.pdf> [accessed 5 12 August 2015].

Figure 7: Cervical cancer screening coverage by district, 2014/15



Map 2: Cervical cancer screening coverage by sub-district, 2014/15

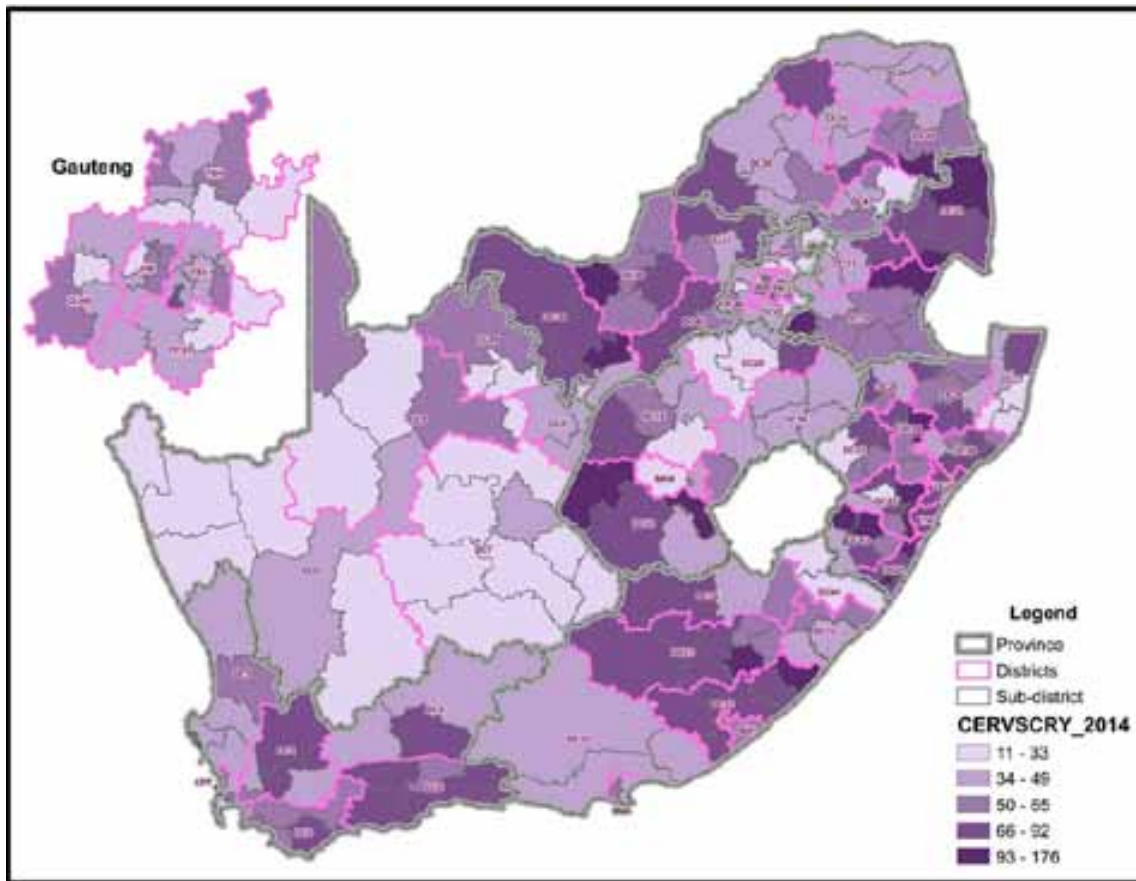


Figure 8: Annual trends: Cervical cancer screening coverage

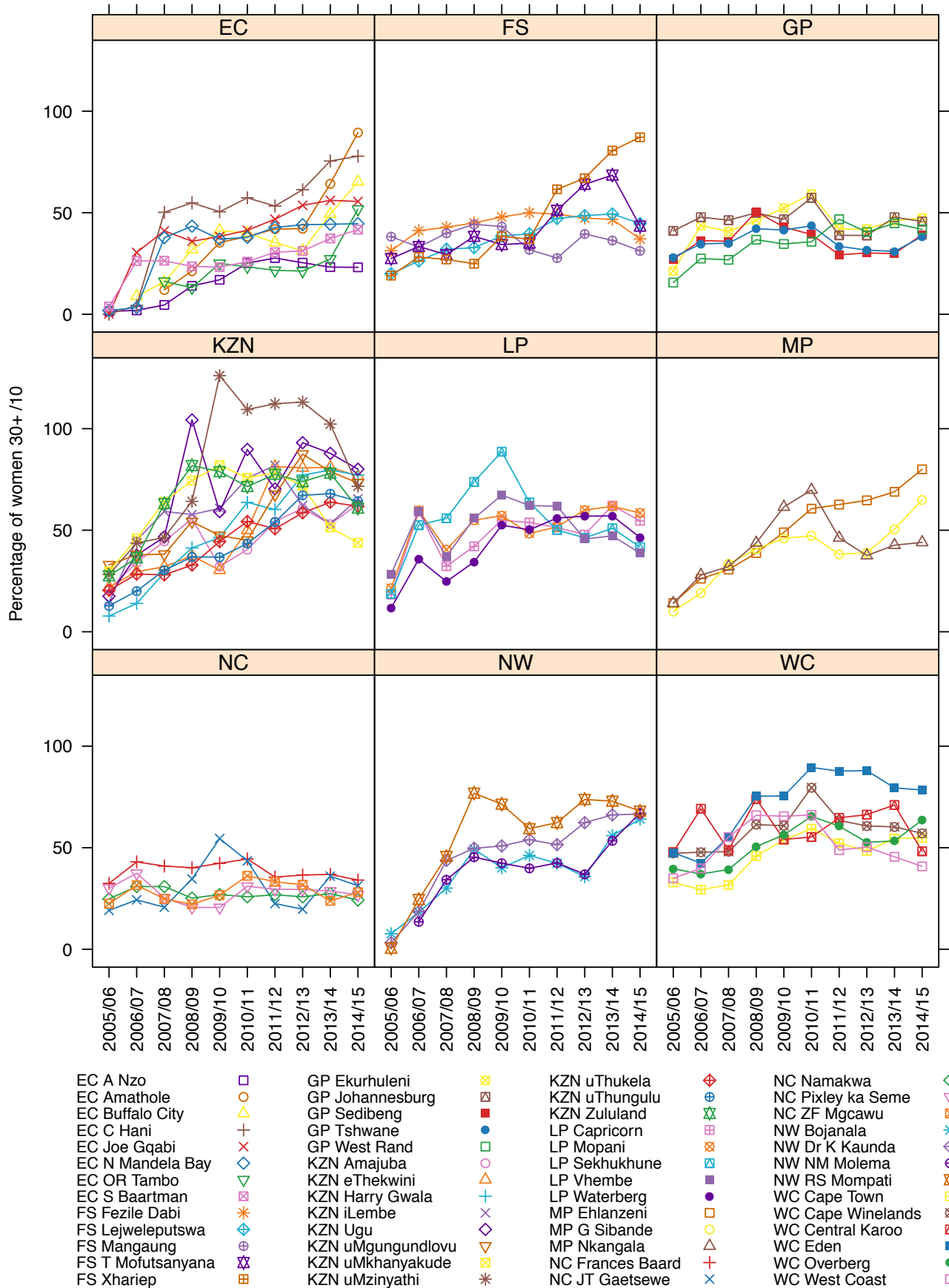


Figure 9: Trends in average district values by SEQ for cervical cancer screening coverage

