

Adult deaths, poverty dynamics and child welfare in KwaZulu-Natal: evidence from a household panel survey

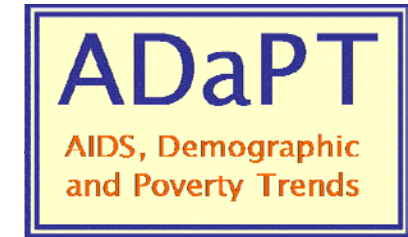
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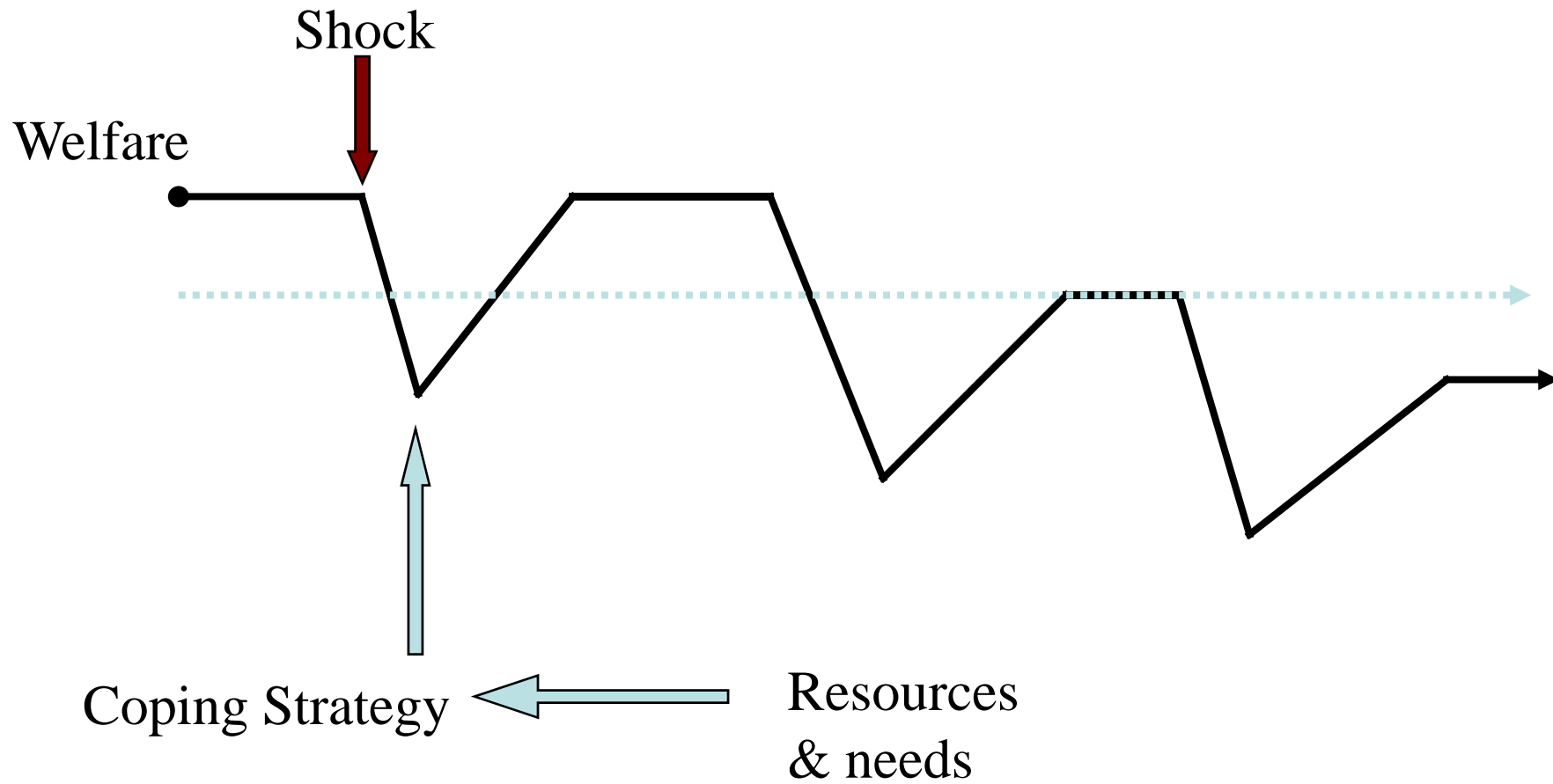
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Background



- This research is part of a larger project examining the economic impact of the AIDS epidemic and the social policies which might mitigate it in South Africa
- Most demographic analyses treat socioeconomic status as an exogenous explanation of demographic phenomena
- Likewise, microeconomic analysis usually treats demographic change as exogenous or even ignores it entirely
- The challenge to welfare posed by the HIV/AIDS epidemic in Africa demands a more sophisticated understanding of inter-relationships between demographic and poverty dynamics
- The project aims to investigate the extent to which adult death is an economic shock and whether the impact of such deaths is mitigated by demographic as well as economic responses

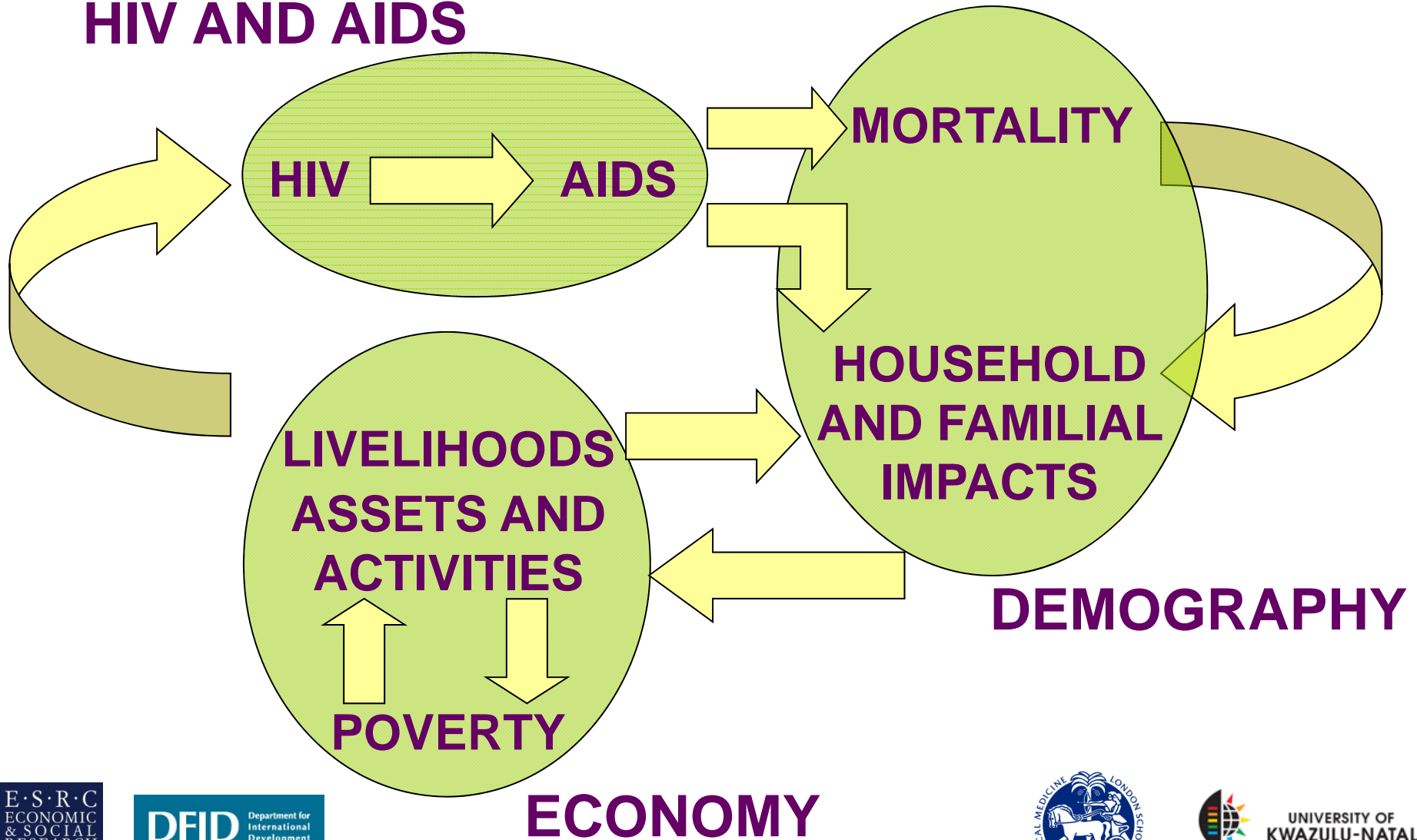
Death and chronic poverty



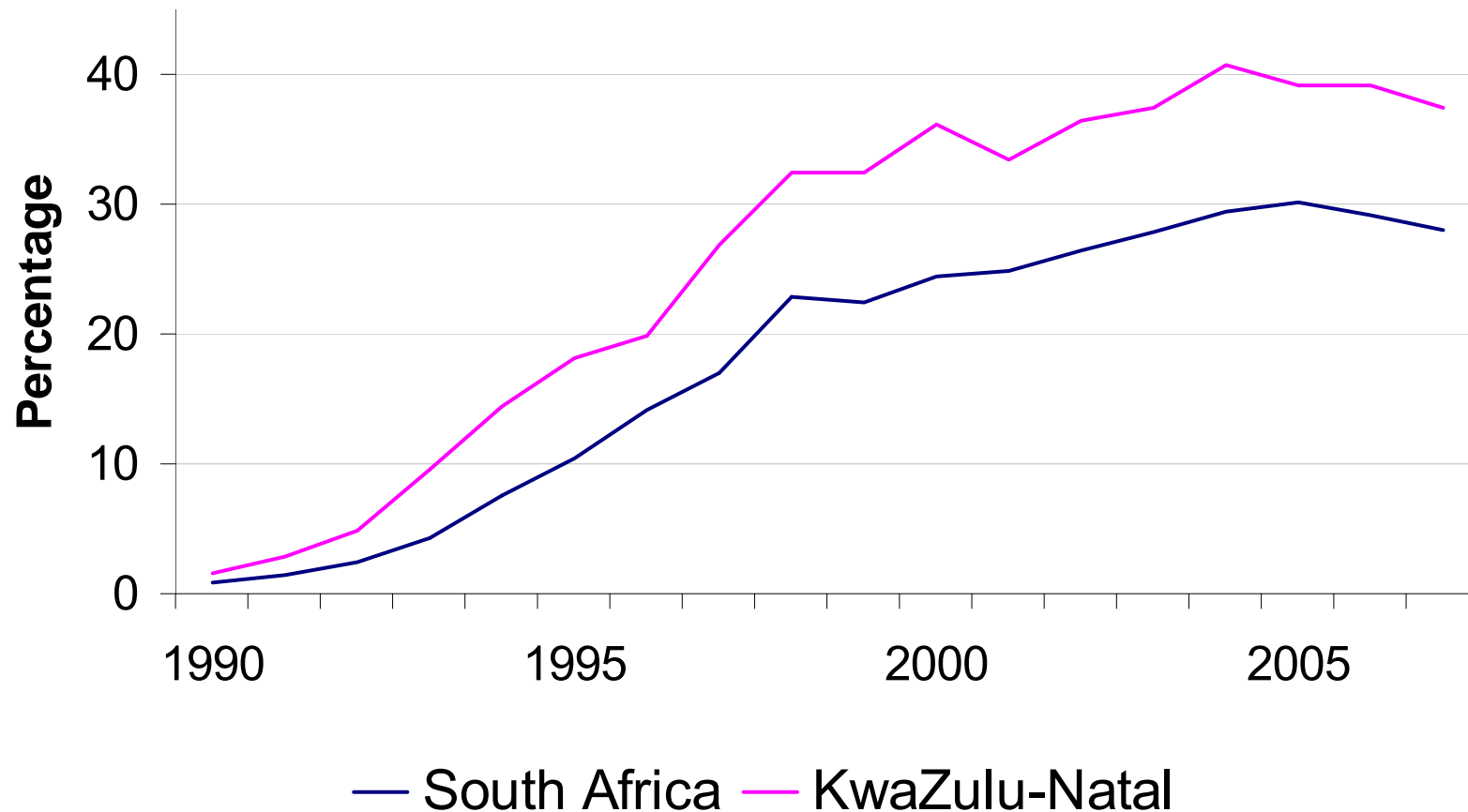
AIDS, population and poverty



HIV AND AIDS



Prevalence of HIV infection among women attending antenatal clinics



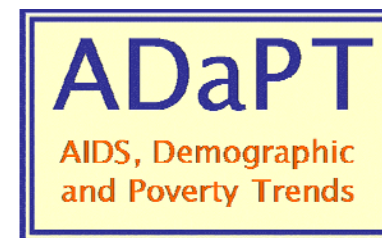
KwaZulu-Natal Income Dynamics Study

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- Panel study based on 1354 African and Indian households interviewed in KwaZulu-Natal in 1993
- 2nd wave of interviews in 1998 and 3rd wave in 2004
- Uses a World Bank LSMS-style questionnaire with detailed data on households' expenditure and wealth (value of assets + savings - debts)
- Interviews all branches of households that have split and households established by the next generation as well as the original households
- Although the panel has suffered substantial attrition (38%), in aggregate its characteristics in 2004 remain broadly representative of the province according to the 2001 Census

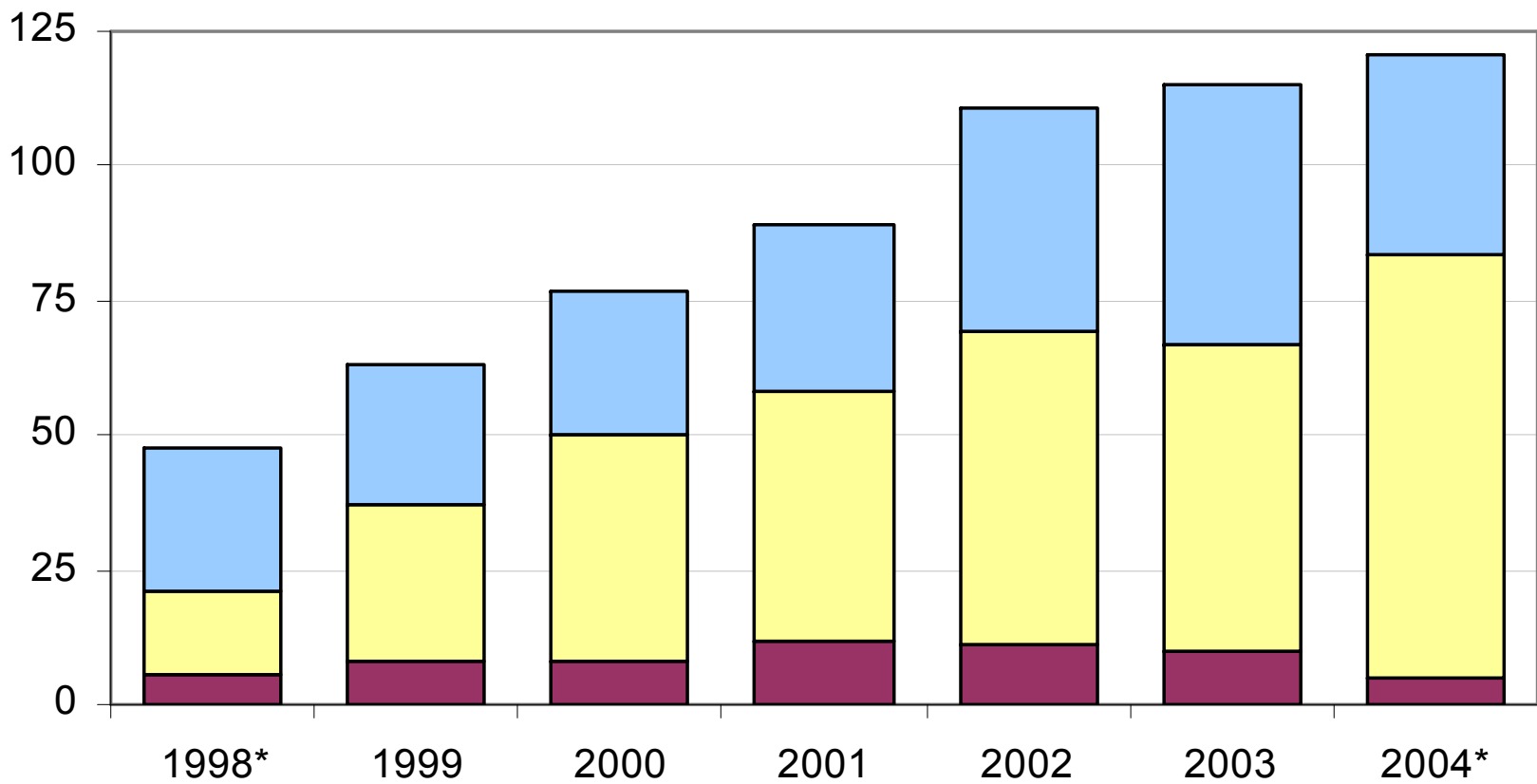
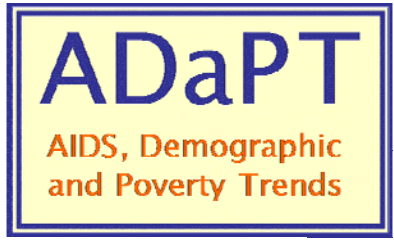
Demographic dynamics of KIDS households



	1993-1998		1998-2004	
	No adult deaths	1+ deaths	No adult deaths	1+ deaths
Deaths at ages 20-44		109		367
Deaths at ages 45-59/64		67		130
% adult deaths of women		44%		53%
% hhds fostering children out	29%	34%	21%	31%
No of hhds	1011	160	800	384

Deaths by age in 1998 and year, KIDS

(* prorated to a full calendar year)



■ Age 0-19 ■ Age 20-44 ■ Age 45+



% of households experiencing a young adult death by expenditure quintile



Expenditure quintile at start of period	1993-1998	1998-2004
Poorest 20%	12	21
20-40%	9	13
40-60%	11	16
60-80%	14	13
Best off 20%	3	6
Total	10	14

Impact of adult deaths on household expenditure

Model of the impact of adult deaths on the growth in per capita expenditure



- Depending on what adults who died contributed to their households, the impact of adult deaths on per capita expenditure (y_i) may be -ve or +ve
- To allow for heterogeneous effects of deaths, we use a household fixed-effects regression equation modelling the growth rate in pce as follows:

$$r_{it} = (\ln(y_{i,t}) - \ln(y_{i,t-n})) / n$$

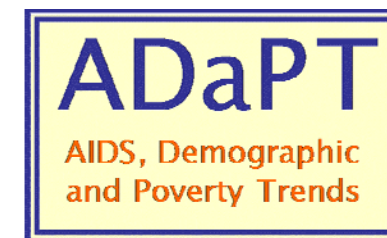
$$r_{it} = \upsilon_i + \beta_1 \lambda_{2004} + \beta_2 [\ln(y_{i,t-n})] + \beta_3 m_{i,t}$$

$$+ \beta_{5,t} d_{i,t} + \beta_{6,t} [d_{i,t} \ln(y_{i,t-n})] + \sum_x \beta_x X_{i,t-n} + \varepsilon_{it}$$

where the coefficients β_4 and β_5 allow the impact of a young adult deaths d_{it} in household i between waves of fieldwork at $t-n$ and t to:

- differ from that of a death in middle age, m_i
- differ between the two periods 1993-98 and 1998-2004
- vary with the household's level of initial economic well-being, $\ln(y_{i,t-n})$
- To avoid autocorrelation bias, we instrument Δy_i in the fixed effects model with y_{i-2}

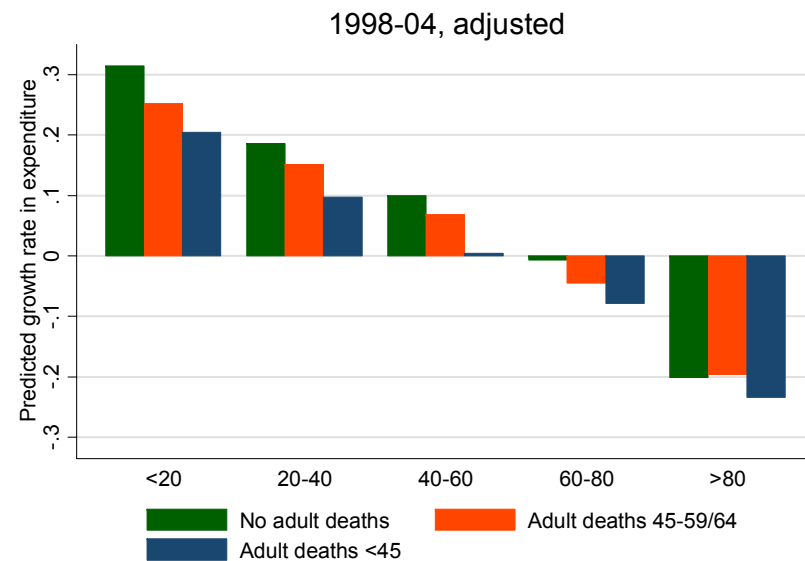
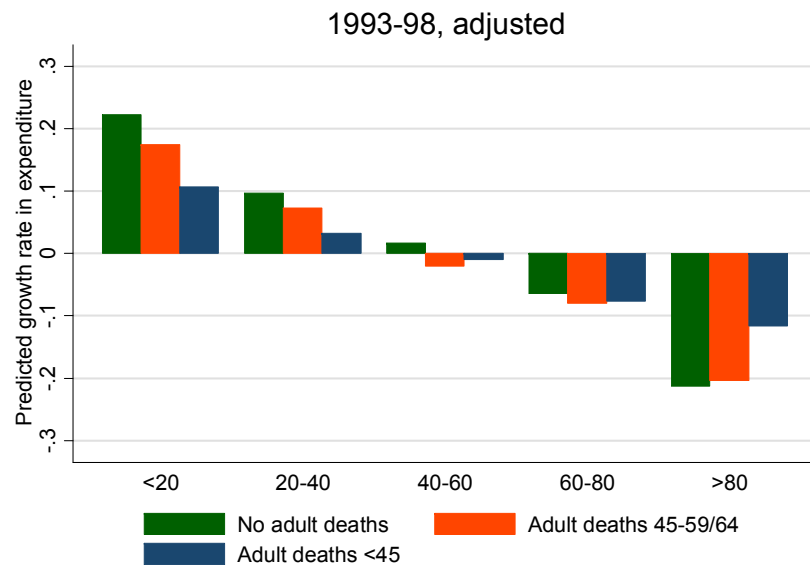
Two stage fixed-effects models of the impact of adult deaths on the growth in household per capita expenditure



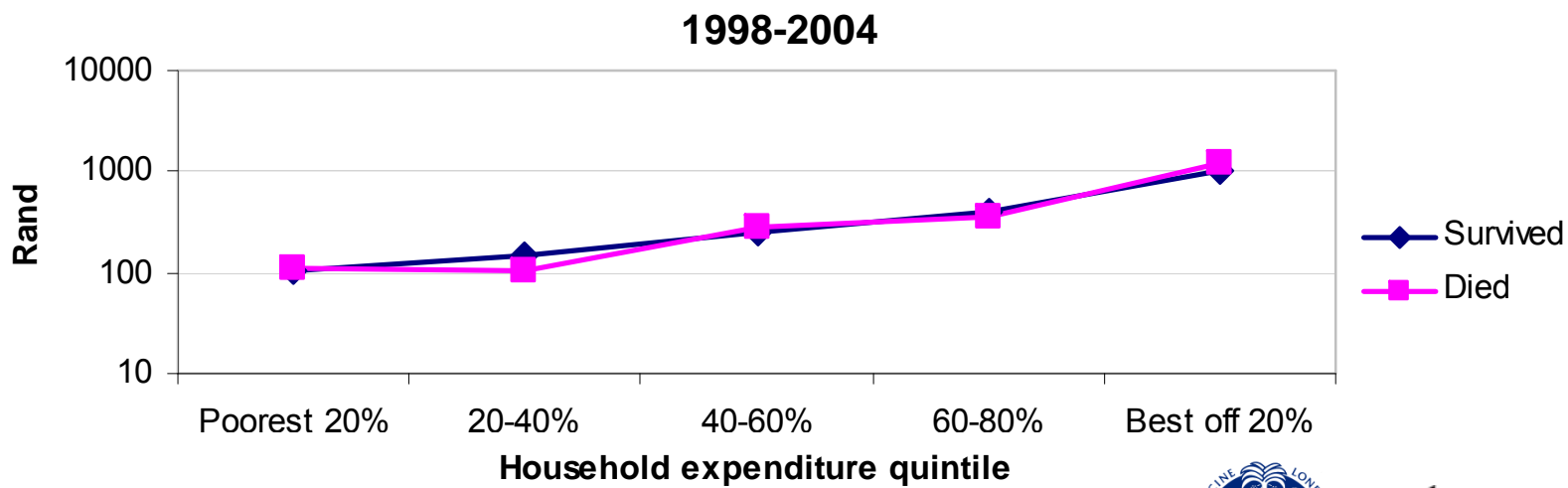
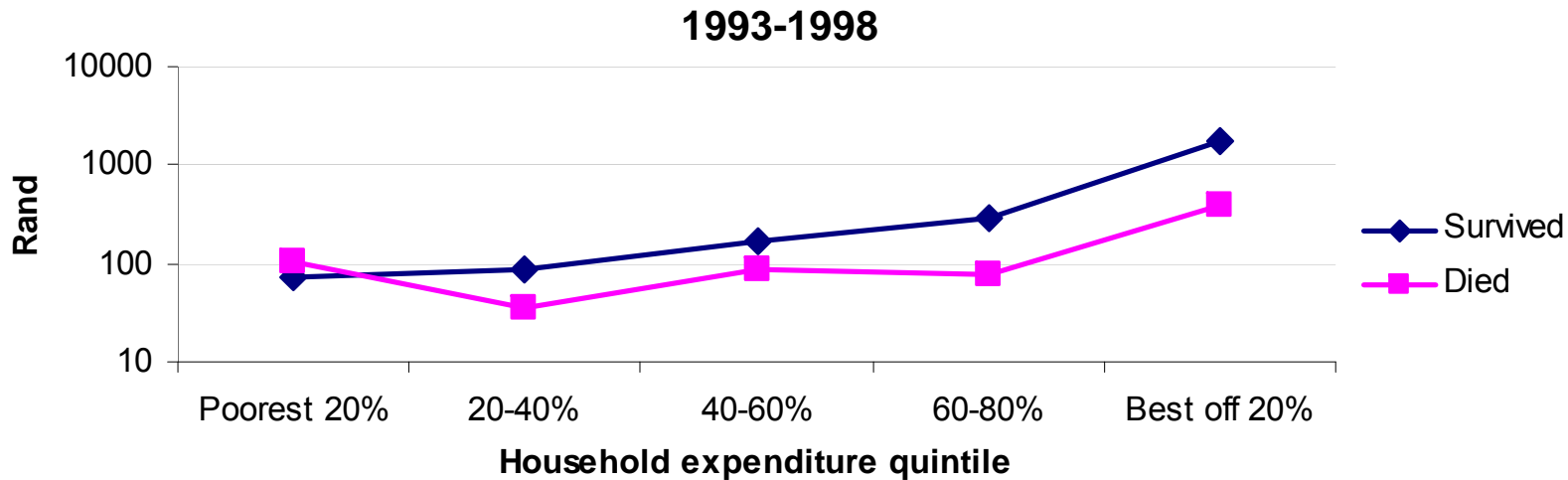
Explanatory variable	Poorest third		Middle third		Best off third	
	Coef.	Std. Err.	Coef.	Std. Err.	Coef.	Std. Err.
Intercept	0.8581	0.0752	1.2393	0.3313	0.2000	0.3303
Initial log per capita expenditure (2000 rand)	-0.1749	0.0114	-0.1473	0.0151	-0.0552	0.0458
1+ adult deaths at 45-59/64	0.0778	0.0304	-0.1281	0.0545	-0.0726	0.0619
1+ young adult deaths, 1993-1998	0.0279	0.0412	-0.1019	0.0622	-0.0982	0.0769
1+ young adult deaths, 1998-2004	0.0700	0.0333	-0.1150	0.0582	-0.1454	0.0685
1998-2004 v 1993-1998	0.0316	0.0106	0.0723	0.0129	0.0828	0.0108
Initial log household assets (2000 rand)	0.0118	0.0124	-0.0555	0.0664	0.0649	0.0224
Initial log assets * Any adult death	-0.0004	0.0040	0.0146	0.0062	0.0238	0.0078
Initial log household wealth ²	-0.0016	0.0008	0.0012	0.0033	-0.0050	0.0014
Initial log household debts (2000 rand)	-0.0041	0.0016	-0.0019	0.0019	-0.0042	0.0017
Years since most recent death	-0.0707	0.0204	0.0122	0.0268	-0.1535	0.0425
Years since most recent death ²	0.0105	0.0042	-0.0054	0.0053	0.0272	0.0081
Mean years of schooling of adult residents	0.0011	0.0026	-0.0081	0.0036	-0.0016	0.0040
Initial household size	0.0072	0.0019	0.0048	0.0030	0.0278	0.0070
% of residents aged 20 to retirement age	-0.0755	0.0367	0.1070	0.0419	-0.0710	0.0500

Note: The models also control for a range of adverse shocks other than death

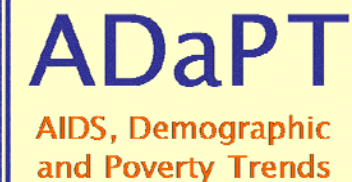
Impact of adult deaths on the growth in per capita expenditure, KIDS



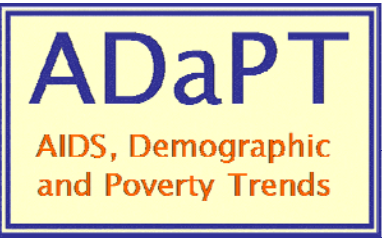
Initial earnings of young adults who survived and who went on to die, 1993-98 and 1998-04



Ratio (x 100) of grant income to household expenditure by expenditure quintile



Expenditure quintile	1998	2004
Poorest 20%	29	59
20-40%	23	37
40-60%	13	21
60-80%	9	9
Best off 20%	3	2
Total	10	13



Impact of adult deaths on child welfare



Determinants of child fostering (fixed effects regression)

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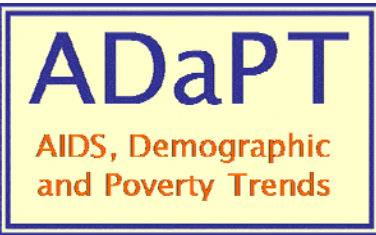
Variable	Odds Ratio	95% Confidence interval	
Adult death in household	0.685	0.382	1.228
Mother died	3.935	1.846	8.391
Father died	1.724	0.898	3.309
Initial log expenditure	1.233	0.723	2.103
Initial log net wealth	0.867	0.645	1.166
Mean years schooling adults	0.971	0.883	1.067
Age of child	1.610	0.357	7.252
Age of child ²	0.982	0.930	1.038
Urban v rural	1.031	0.436	2.436
Metropolitan v rural	2.352	1.017	5.440
Non-African v African	0.240	0.049	1.168
Age of household head	0.983	0.964	1.003
Initial household size	0.997	0.926	1.073

Impact of fostering 1998-04 on the child's standard of living in 2004

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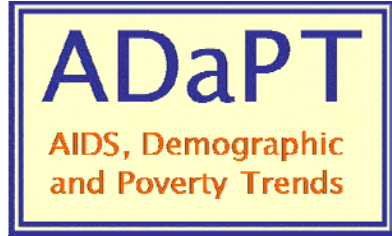
Variable	Coefficient	95% Confidence interval	
Fostered vs not	0.267	0.094	0.441
Log expenditure in 1998	0.334	0.231	0.437
Log expenditure in 1993	0.114	0.018	0.210
Log net wealth in 1998	0.021	-0.038	0.080
Mean years schooling adults	0.056	0.038	0.074
Household size in 1998	-0.006	-0.019	0.008
Age of child	0.104	-0.177	0.384
Age of child ²	-0.004	-0.014	0.006
Urban v rural	0.227	0.073	0.380
Metropolitan v rural	0.352	0.170	0.534
Non-African v African	0.664	0.436	0.892
Age of household head	0.002	-0.002	0.006
Constant	1.655	-0.340	3.649

Odds of being 2+ grades behind at school, KIDS (controlling for year of birth)



Variable	Coding	Household random-effects model		Household fixed-effects model		Individual fixed-effects model	
		OR	95% CI	OR	95% CI	OR	95% CI
Race (ref: African)	Indian	0.25	0.13–0.48				
Residence in 1993 (reference: rural)	urban	0.53	0.38–0.73				
	metropolitan	0.52	0.35–0.77				
Sex of child	girls v boys	0.44	0.38–0.51	0.44	0.37–0.53		
Per capita household expenditure (PCE)	ln(PCE/poverty line)	0.64	0.57–0.73	0.84	0.71–1.00	0.65	0.38–1.11
Mother's characteristics (reference: resident HH member with primary schooling)	no schooling	1.98	1.40–2.81	1.43	0.88–2.33	7.87	0.46–135
	some secondary	0.75	0.57–0.99	0.97	0.66–1.41	0.89	0.05–14.4
	full secondary	0.45	0.29–0.69	0.73	0.42–1.27	0.26	0.02–4.23
HH member with primary schooling)	not resident	1.05	0.81–1.36	1.11	0.80–1.53	1.95	0.19–20.1
	mother dead	1.15	0.84–1.59	1.19	0.81–1.77	3.00	0.16–57.1
Father's characteristics (reference: resident)	non-resident	1.30	0.94–1.79	1.24	0.83–1.87	1.68	0.44–6.49
	not member	1.57	1.26–1.96	1.72	1.31–2.27	2.03	0.56–7.28
	father dead	1.57	1.24–1.99	1.71	1.27–2.32	4.00	0.81–19.7
Wave of KIDS	2004 v 1998	0.63	0.54–0.74	0.61	0.51–0.73	12.22	6.76–22.1
Children contributing information		5461		4190		572	
Households contributing information		1002		580			

Relative odds of having given birth as a teenager* (resident African women aged 16-23, 2004)



Variable	Category	Robust logit model		Cluster fixed-effects logit model	
		Odds ratio	P	Odds ratio	P
Household per capita expenditure (<i>pce</i>), 1993	$\ln(pce / \text{poverty line})$	0.51	0.046	0.51	0.089
Household per capita expenditure (<i>pce</i>), 1998	$\ln(pce / \text{poverty line})$	0.96	0.876	0.98	0.946
Grade relative to grade expected for age	0 or 1 grades behind	1		1	
	2+ grades behind	1.21	0.636	1.27	0.582
Residence of father in child's household	Resident member	1		1	
	Non-resident member	0.74	0.618	0.65	0.455
	Non-member	2.06	0.031	2.32	0.038
	Dead	2.95	0.031	2.77	0.040
Residence	Rural	1			
	Urban/Metro.	0.36	0.020		
Cluster mean HH <i>pce</i> , 1998	$\ln(pce / \text{poverty line})$	1.60	0.326		
% households in cluster that have applied for the Child Support Grant		0.43	0.578		

Source: KwaZulu-Natal Income Dynamics Study

* controlling for women's age

Summary of findings (adult deaths)

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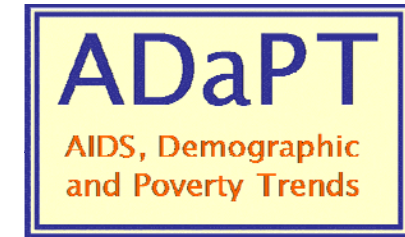
- Young adult deaths have an adverse impact on the expenditure per head of households in KwaZulu-Natal:
 - better-off households are worst affected; poor households seem to benefit on average as the majority of those dying are net consumers
 - deaths of young adults have worse effects than those in middle age
- Young adult deaths became a more frequent event after 1998, with households on below median income being especially likely to lose young adult members
- On the other hand, in this later period (1998-04) young adult deaths hit households on above median income particularly hard
- This was because the young adults who died no longer had lower earnings than survivors, while <1998 they were less productive
- The economic impact of adult deaths varies by age of the person dying and over time and depends on the economic characteristics of the affected household – no simple generalisations emerge!

Summary of findings (children)

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- Fostering children became less, not more, common after 1998
- Maternal orphans tend to be fostered out; otherwise little evidence exists that fostering is crisis driven
- Orphans and other foster children are no poorer than other children, **but** they do have worse welfare outcomes
- Fathers matter as well as mothers, particularly for older children – those whose fathers are dead or unconnected with the household are:
 - more likely to fall behind at school
 - more likely to give birth as teenagers
- Lastly: the improved income trends of the poor after 1998 is associated with their increased income from grants, especially the Child Support Grant

Conclusions



- In KwaZulu-Natal, deaths of young adults (largely from AIDS) are not usually catastrophic for poor households
- This is in part an achievement of the welfare grants system as well as reflecting high unemployment and the unimportance of farming in the livelihoods of the rural poor in South Africa
- Thus, our findings suggest that, while HIV infection and AIDS mortality are associated with poverty in South Africa, they are not a major cause of poverty
- Young adults dying of AIDS are not selected for low productivity, suggesting that such deaths must have a knock-on effect on the South African economy
- Orphans need support services, not additional cash grants

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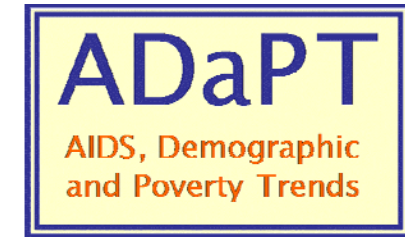
HIV-related deaths and economic shocks: does survivors' consumption recover over time in KwaZulu-Natal?



Alessandra Garbero

Ian Timaeus

ADaPT aims and objectives



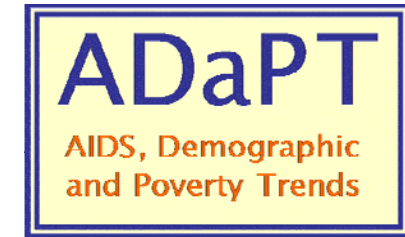
Aim: to improve understanding of demographic and poverty dynamics

Objectives:

1. understand better the impact of deaths of working-age adults on household welfare and households' responses
2. assess social policy interventions designed to mitigate impact and their distributional implications across the life course

Data: KIDS & ACDIS

Analysis of the ACDIS data



- Estimate the impact of adult deaths by cause, gender and employment status of the deceased member, on survivors' household per capita food expenditure/consumption in a rural area of South Africa (part of Umkhanyakude district)
- Assess whether survivors' households recover economically from past and contemporary mortality shocks
- Africa Centre Demographic Information System (ACDIS):
 - large **longitudinal** study
 - collects **detailed demographic data**, including causes of death
 - and has collected **multiple waves** of socio-economic data (we analyse 3)
- This means that sophisticated econometric models can be applied to estimate the impact of adult deaths, controlling for various sources of bias that affect most other micro-level studies of the consequences of the AIDS epidemic

Context of research

South Africa: HIV/AIDS Pandemic & Poverty



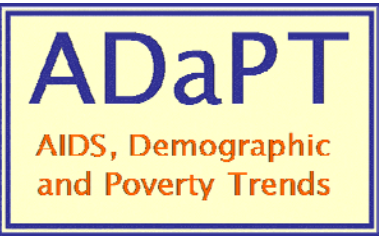
- HIV/AIDS is now the leading cause of death in South Africa.
- KwaZulu-Natal one of the most severely affected provinces: by 2004 the prevalence of HIV infection among pregnant women had risen to 29.5% nationally and 41% in KwaZulu-Natal
- **Not just HIV/AIDS:** Rural areas such as Umkhanyakude suffer from high levels of unemployment and poverty that date back to the Apartheid era

Background: What do we know?



- AIDS-related deaths present HHs with a protracted **shock** characterised by a series of events that occur as illness progresses.
- Theoretical and qualitative studies: **multifaceted loss** to rural households; loss of:
 - on-farm labour,
 - off-farm income from wage labour or own-business activities
 - technical knowledge of agricultural production and marketing,
 - access to land,
 - liquidation of livestock, farm equipment or other assets
- **medical expenses** during the illness and **funeral expenses** after death
- Large and representative socio-economic surveys find that **impacts vary considerably** conditional on characteristics of:
 - the deceased individual (household position and gender)
 - the household (*ex-ante* asset or poverty status)
 - Drimie, 2002; Yamano and Jayne, 2004; Chapoto, 2006

Background: difficulties in measuring impact



Recent research has found **structurally diverse mortality effects across HHs** (Gillespie 2006)

Conditionality: effects depend on the household's and individual's initial characteristics

Country-specific context: Existing results also suggest that the magnitude and type of household effects may vary across countries (and regions within some countries)

Responses: explanation of heterogeneous effects include differences in household responses/coping strategies as well as differences in the immediate effect of the death

Temporal heterogeneity of impact: Does the effect of deaths on consumption differ with time since death?

- Little evidence → most studies have short follow-up times
- At other extreme, one study (Beegle) finds no “long-term impact” → households have recovered from deaths occurring >5 years ago

Background: difficulties in measuring impact



Endogeneity=simultaneity / unobserved heterogeneity

- This is the problem that the association between welfare and AIDS may be that poverty is a risk factor for HIV infection, not the other way round

- Interested in causal model:

$$\text{Welfare} = \beta \text{AIDS} + \varepsilon$$

- But a causal relationship may exist in other direction:

$$\text{AIDS} = a \text{Welfare} + \mu$$

Africa Centre Demographic Information System (ACDIS)

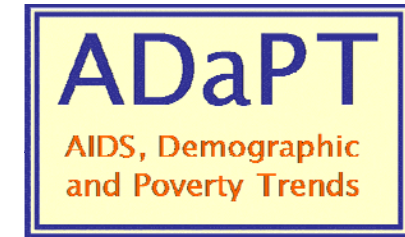


- Data on more than 11,000 households (HH) and 89,000 individuals in part of the Umkhanyakude district of KwaZulu-Natal since the beginning of 2000
- HH visited every 6 months to obtain reports of births, deaths, migration and changes in household membership (rounds)
- Verbal autopsies** are used to determine causes of death
- HH expenditure data collected on alternate visits (**HSE**)
- Consumption module subject to data contamination: usual problems in surveys (misreporting, miscoding of units)

	Visit date	Rounds	HH
HSE 2	Feb 2003-Aug 2004	8,9,10	10821
HSE 3	Jan-Aug 2005	12	9769
HSE 4	Jan-Aug 2006	14	9383

Presentation of results

Estimation of impact of adult deaths on welfare proxied by food per capita expenditure per resident member



A) Differential impact: by cause & time since death

Impacts of recent deaths

- Total deaths
- by cause and employment status

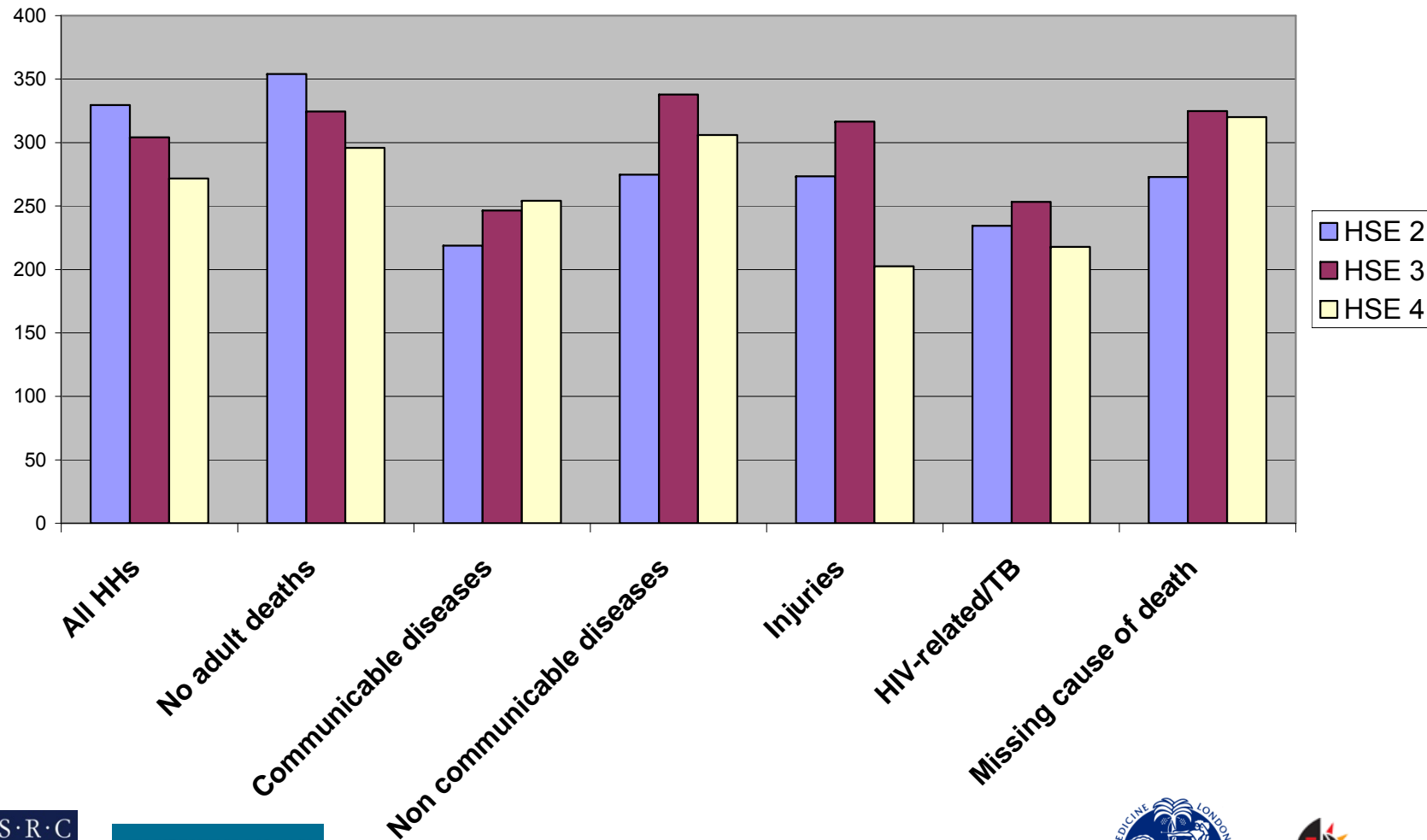
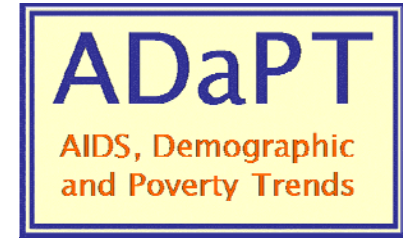
Impact of earlier deaths

- Total deaths
- by cause and employment status

B) Conditional impacts: on average “welfare”

Heterogeneous model: stratified by thirds (tertiles) of average per capita expenditure (pce)

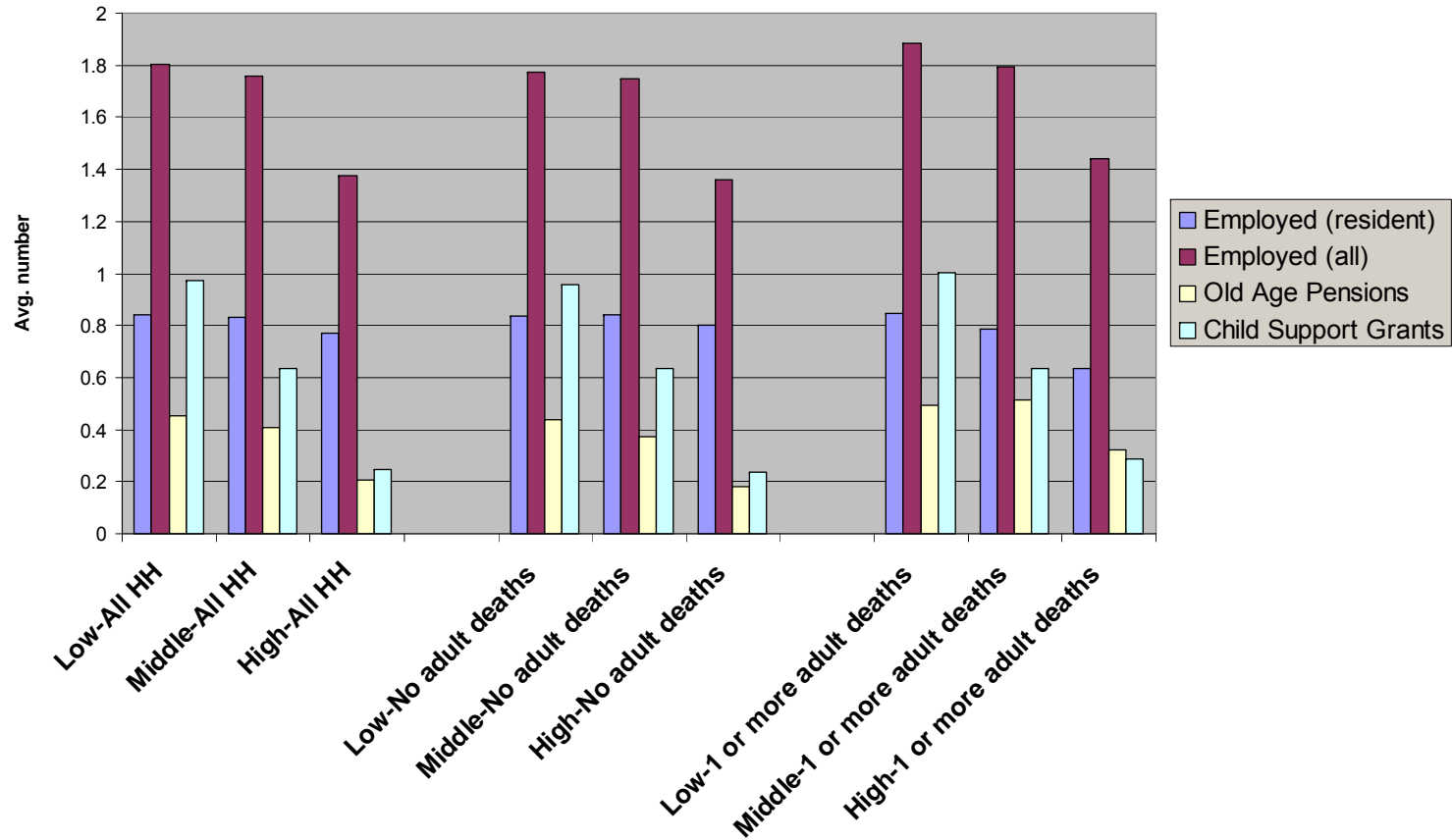
Average per capita expenditure (imputed) by cause of adult death



Employment & Grants



Average no. of employed (residents & all members), OAPs, CSGs, by tertile of initial PCE, HSE 2.



Adult deaths and economic mobility



Transition matrices by cause of adult death (18-59 years).

	Tertiles	No deaths			1+ deaths			Number of Households
		1	2	3	1	2	3	
HIV-related/TB*	1	0.565	0.306	0.129	0.575	0.293	0.132	2,922
p-value=0	2	0.277	0.426	0.297	0.355	0.395	0.251	2,787
	3	0.152	0.284	0.565	0.181	0.324	0.495	2,188
Non-communicable	1	0.566	0.305	0.129	0.598	0.241	0.161	2,922
p-value=0.42	2	0.289	0.424	0.287	0.288	0.338	0.375	2,787
	3	0.145	0.267	0.584	0.114	0.321	0.565	2,188
Cor								
p-v								
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Results

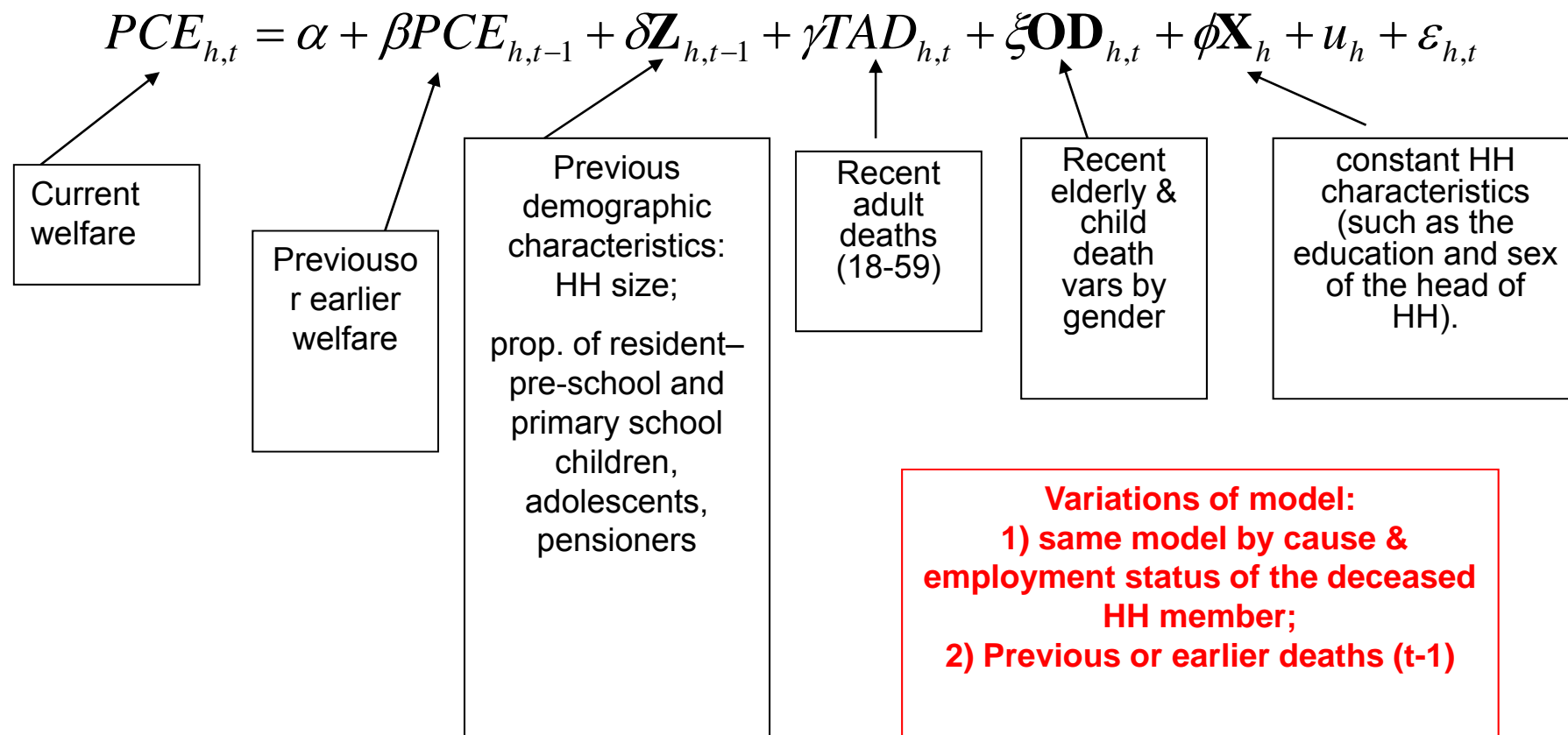
1. Mortality due to AIDS and communicable diseases is associated both with downward mobility among the better-off and the failure of the poor to improve their income
2. Mortality from injuries affect the rich but do not prevent upward mobility among the poor.

Chi-square sig. at 0.05 level.

Basic model of interest: Impacts of recent adult deaths

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Issues with the models of interest

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Endogeneity = Omitted variable bias/unobserved heterogeneity

- Bias due to failure to control for variables that affect both mortality and income
- Answer: fixed effects estimator

Endogeneity = Simultaneity

- Reciprocal impact of changes in income on mortality
- Answer: control for earlier income

Bias due to temporal auto-correlation of income

- Answer: purge PCE_{t-1} variable of bias by using assets/ PCE_{t-2}

Methods & proposed solution



Use a model that controls for the effects of both fixed HHs characteristics and earlier consumption shocks on the propensity of HHs to experience adult deaths

To address the potential endogeneity of adult deaths:

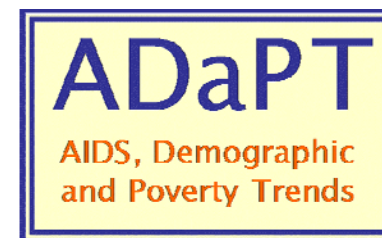
- Assumes only that adult deaths are **predetermined** rather than fully exogenous.
- Predetermined: correlated to lagged values of structural errors but uncorrelated to present and future errors *i.e. deaths are affected only by earlier income not contemporaneous income*

To cope with biases due to the temporal auto-correlation of HH consumption:

- Use the Anderson and Hsiao level estimator : instrument differenced household expenditure with $t-2$ level (Anderson and Hsiao 1981; 1982)

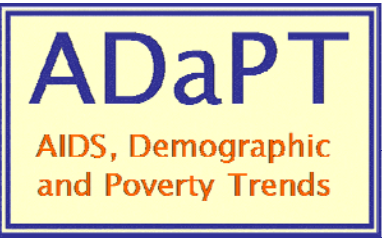
Homogenous model	Impact of recent deaths	Impact of earlier deaths	Impact of recent deaths	Impact of earlier deaths
	Total deaths		Deaths by cause & employment	
Food PCE (lagged)	0.35***	0.36***	0.35***	0.36***
	(0.04)	(0.04)	(0.04)	(0.04)
HSE 3 (omitted category HSE2)	0.01	0.01	0.02	0.01
	(0.02)	(0.02)	(0.02)	(0.02)
Resident members (lagged)	0.13***	0.13***	0.13***	0.13***
	(0.01)	(0.01)	(0.01)	(0.01)
Adult deaths (18-59F/18-64M)	0.03**	0.00		
	(0.02)	(0.01)		
Child deaths <18 females	-0.04	0.05	-0.04	0.05
	(0.05)	(0.03)	(0.05)	(0.03)
Child deaths <18 males	-0.01	0.05	-0.01	0.05
	(0.05)	(0.03)	(0.05)	(0.03)
Elderly deaths (+60F/+65M)	0.02	0.01	0.02	0.02
	(0.04)	(0.03)	(0.04)	(0.03)
Deaths of employed from communicable diseases			-0.01	0.12
			(0.09)	(0.11)
Deaths of those not employed from communicable diseases			-0.17**	0.27***
			(0.08)	(0.09)
Deaths of employed from non-communicable diseases			0.00	0.04
			(0.09)	(0.11)
Deaths of those not employed from non-communicable diseases			-0.04	-0.02
			(0.09)	(0.09)
Deaths of employed from injuries			0.01	0.07
			(0.16)	(0.14)
Deaths of those not employed from injuries			-0.01	0.08
			(0.12)	(0.09)
Deaths of employed from HIV-related causes (including TB)			-0.10**	0.10**
			(0.05)	(0.05)
Deaths of those not employed from HIV-related causes (including TB)			-0.02	0.03
			(0.05)	(0.04)

Models of the impact of adult deaths on current food per capita consumption (FPCE) by tertile of avg. PCE



Impact of	Poorest tertile	Middle tertile	Least poor tertile
Previous FPCE on current FPCE	Increase current FPCE by 8% (0.10)	Increase current FPCE by 45% (0.01)	Increase current FPCE by 59% (0.01)
Recent deaths	Adult deaths increase current FPCE by 8% (0.05)	No impact of such deaths	No impact of such deaths
Earlier deaths	No impact	Earlier female child/adolescents deaths increase FPCE by 11% (0.05)	Earlier adult deaths increase current FPCE by 8% (0.05)
Recent deaths by cause & employment	No impact	Recent deaths of unemployed due to communicable diseases decrease FPCE by 27% (0.05)	Recent deaths of employed & unemployed due to HIV-TB decrease current FCPE by 27% (0.10) & 24% (0.05); recent deaths of unemployed due to injuries decrease FPCE by 61% (0.10)
Earlier deaths by cause & employment	Earlier deaths of unemployed due to communicable diseases increase FPCE by 29% (0.05)	Earlier deaths of unemployed due to communicable diseases increase FPCE by 31% (0.01); earlier deaths of unemployed due to non-communicable diseases decrease FPCE by 23% (0.10)	Earlier deaths of unemployed due to HIV-TB increase FPCE by 27% (0.05); Earlier deaths of employed due to injuries increase FPCE by 49% (0.01); Earlier deaths of employed due to communicable diseases increase FPCE by 69% (0.01)
Demographic initial characteristics	Earlier HH size increase current FPCE by 5% (0.01)	HH size 17% (0.01);	HH size 20% (0.01)
Time effects	Negative time trend	No impact	Positive time trend

- Results more heterogeneous across tertiles, coefficients generally larger in magnitude for the third tertile
- (-ve) effect of recent vs. (+ve) effect of earlier adult deaths by empl. status
- Better off households hardest hit by the loss of their absolute members in the short-term but best able to recover in the longer run



Conclusions



Conclusions

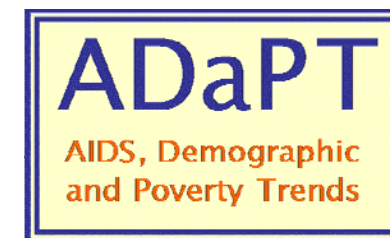


I have estimated effects of adult mortality on welfare by gender, cause of death and employment; short & medium-term impact; correct for auto-correlation bias

Methodologically:

- Difficult to obtain **unbiased estimates** of impact of AIDS mortality on welfare
- Complexity not adequately taken into account in standard models (OLS/FE/2SLS)

Conclusions (ctd)



Substantive results: Average model

- On average, the short-term consequences of the death of an adult tends to increase food expenditure per capita, presumably because the household is left with fewer mouths to feed
- Contemporary or recent deaths of employed household members negatively affect current food consumption in the short-term, an effect which is significant at 5% level in the case of HIV-related deaths.
- Consumption in the survivors' households recovers in the medium-term: earlier deaths of the employed are associated with positive changes in later per capita food consumption

Conclusions (ctd)

Stratified model: Once we control for avg. HH consumption

- There is evidence of divergence – the poor get richer but the richer get richer
- Adult deaths positively affect current expenditure for the poorest HHs in the short term implying that the economic contribution of such individuals is marginal i.e. adult deaths only benefit the poor
- HHs at the top of the consumption distribution are adversely affected by HIV-related deaths in the short-term but recover in the longer run
- Hit & recovery from HIV-related deaths also extends to middle third (although the impact is smaller compared to the richest)
- Evidence of negative impact of an adult death is also present when the person is non-employed in the top tertile (suggesting expenditure on care could be a factor)
- Although the findings imply that there is a positive effect of recent adult deaths on food expenditure at aggregate level, previous poverty remains one of the key explanatory factor for the negative impact of adult deaths
- The latter is suggestive that if a HH is already poor, the impacts of adult deaths due to AIDS or other causes by employment status are negligible given the marginal contribution of its members

Implications for social welfare programs



- Poor HHs: if working age adults are mostly unemployed → absence of large impact of adult death by employment status. HHs mostly rely on grants as source of income
- Better off HHs: grants constitute a smaller proportion of income vis a vis earned income, therefore adult deaths of earners have an impact
- The lack of a grant for working age adults who can't find employment means that their contribution to HH income is marginal
- The latter implies that CSGs/OAPs are being used to support needs of whole HH. Thus even if food expenditure recovers, elderly and children food consumption may be curtailed around the time of an adult death
- If old age pensions act as potential buffers of increased economic burden that follows an adult death, then consider subsidizing incurred expenses for poor HHs that cannot meet the costs of a death

Acknowledgements



The Africa Centre for Health and Population Studies and its staff

UK Economic and Social Research Council (grant RES-167-25-0076)

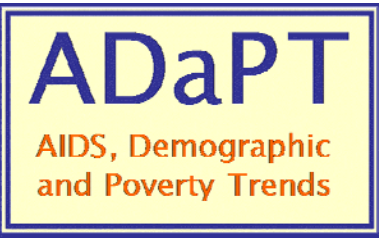
Contact: Alessandra.Garbero@lshtm.ac.uk



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The role of social grants in mitigating the impacts of HIV and AIDS-related illness in rural South African households



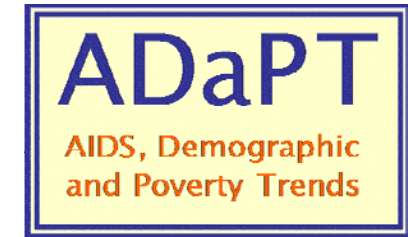
Lucia Knight

Child, Youth, Family and Social Development,
Human Sciences Research Council.

Centre for Population Studies,
London School of Hygiene and Tropical Medicine



Aim and objectives



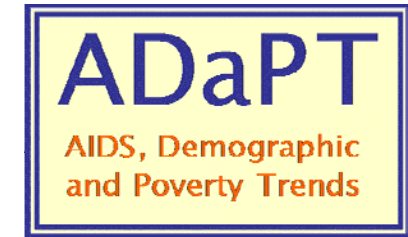
- Aim: To explore the impact of the disability grant on households' and individuals' experiences of illness
- Objectives
 - Assess how access to a disability grant changes the household's experience of illness
 - Explore the relationship between the disability grant and anti-retroviral treatment

Background to the Disability Grant

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- Previous research focuses on the disincentive & trade-off between ART (health) versus the disability grant (income)
 - Research suggests the suspension of grants is poorly monitored & not as widespread as suspected
 - The criteria for grant suspension is no longer CD4 count but rather medically-assessed inability to work
- Other evidence suggests that grants make an important contribution to livelihoods but:
 - How does this impact on household coping strategies?
 - What relationship exists between ART & the disability grant?

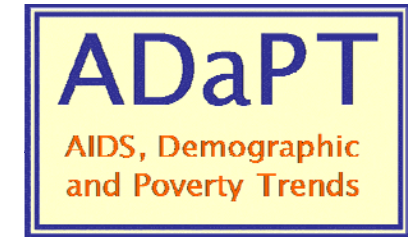
Who was involved in the study?



10 households in Umkhanyakude district:

- 3 from a 2002-2004 ethnographic study of “Household Dynamics and AIDS”
- 5 households identified through the Home-Based Care program and disclosed to their household (2 with members on treatment, 1 indirect impact)
- 1 which had recently experienced a death identified by the Africa Centre verbal autopsy nurses
- 1 previously involved in another related study with the index member well on treatment and working

How was the study conducted?



- Qualitative study using an interview plan and topic guide
- Multiple visits
- In-depth interviews
- Non-participant observation
- Used household genograms and household event maps to display and analyse data
- Retrospective and prospective data collected

Disability Grants in the context of HIV and AIDS in KwaZulu-Natal

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● Eligibility¹

- Women 18 to 59 years
- Men 18 to 64 years
- Medical assessment/report confirming inability to work (no longer CD4 count)
- Individual and spouse must meet means test
- No other social grant receipt for themselves

1.South African Social Security Agency. *About Social Grants*. 2008 [cited 01/09/2008]; Available from: <http://www.sassa.gov.za/content.asp?id=1000000502>.

Disability Grants in the context of HIV and AIDS in KwaZulu-Natal

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- Social grants most significant income source in all but two households
- 4 Households with Disability Grant
 - 1 grant has been suspended; still on ART
 - 1 grant was first received during fieldwork; on ART
 - 2 received grant before or at the same time as ART
- 1 Household with Care Dependency Grant

Difficulty accessing Disability Grant



- Sickness is a major barrier to accessing health services and grant services
 - Transport providers uncooperative
 - Limits ability to travel
- Administrative problems and misunderstandings
 - Unclear rules about who qualifies for the grant
 - Signed approval required from both health staff and the district surgeon

Importance of accessing a Disability Grant



- Nuclear family, both parents sick, one on ART, two resident children.
- Surviving on one CSG and seasonal farm labour

- Before obtaining the grant:

The government should have helped me to get a grant...To go to the clinic you need money. The money is all from credit [now], if I got a grant things would be better. Thobela Ntuli, Sick wife of Household Head

- After obtaining the grant:

It's not like it was before. We are not suffering now. You can see that now I can walk. A person can die, if they are not eating and taking pills [ARVs]. I will be fine now. Thobela Ntuli, Sick wife of Household Head

The impact of not getting a grant

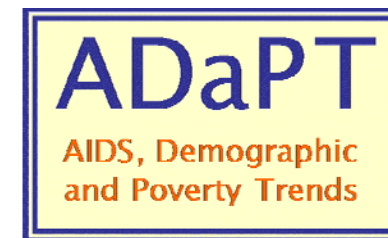


- Large multigenerational household, sick adult daughter on ART
- Surviving on three/four CSGs

We don't have bread. [the sick person] went to the clinic, while she was at the bus stop, she was crying because she was hungry. Nomsa Bhengi, Female household head, 56yrs

[Zinhle] helped me before, but now she is sick and I'm not selling, I'm doing nothing. Nomsa Bhengi, Female household head, 56yrs

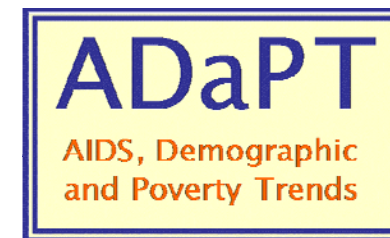
The relationship between the disability grant and ART



When I started taking treatment I went to register for my grant. Everything went quickly and I got it in November [one month after starting ARVs]. I have seen a big difference. I can see that my body is much better. Gugu Dlamini. Sick daughter of Household Head, 33yrs

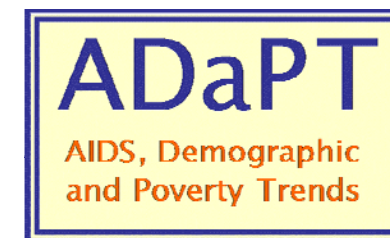
When I went on treatment I became better, I gained weight again and the marks I had on my body are not there anymore. Thembilhle Dube, Sick Household Head, 34 yrs

Disability Grant and ART



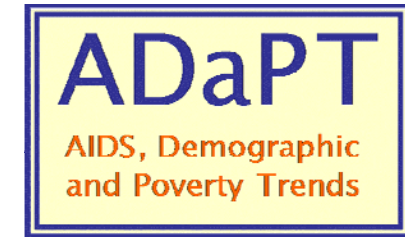
- Disability grant made a huge difference to those on treatment
 - Better able to feed themselves and maintain health
- Also led to important differences and changes in the household
 - Made much more of a contribution to their households than those sick and not getting the grant
 - General household situation improved with access to grant because of the massive difference to household income and also helped maintain or diversify aspects of the livelihood.

Discussion



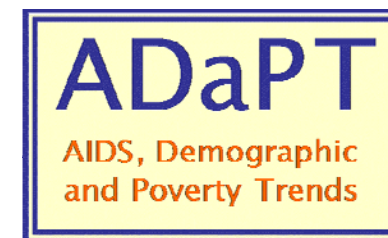
- Those who received a Disability Grant before or at the same time as they started ART had more successful treatment outcomes and were generally able to contribute to better household outcomes
- Synergistic effects of ART and Disability Grants suggests the benefits of the former programme may be lost if patients cannot access the latter grant
- It is important to think about better integrating the processes of obtaining access to grants and treatment.

Recommendations



- Reassess current policy around the provision of grants
 - Simplify or streamline the current system to improve take up of the grant by all those who qualify for it because they have the incurable disease of AIDS
 - An alternative would be to establish a Chronic Illness Grant as advocated by Black Sash
 - A second alternative would be to create a new grant targeted at individuals enrolling in the ART programme with the aim of improving treatment outcomes
- Further quantitative research is needed into access to and take up of grants in relation to treatment

Thank you!



- Study participants from Umkhanyakude
- Zandile Gumede
- Vicky Hosegood and Ian Timaeus
- Africa Centre for Health and Population Studies
- ADaPT
- Economic and Social Research Council

Measuring and valuing unpaid care work for ill people in KwaZulu-Natal:

Findings and policy options

Nina Hunter



SCHOOL OF
DEVELOPMENT
STUDIES

OUTLINE OF PRESENTATION

- Literature reviewed
- Research methodology
- Findings – measuring and valuing unpaid care provision
- Findings – comparing costs of unpaid care provision and costs of other interventions
- Conclusions
- Policy options

LITERATURE

Gender and the economy of paid and unpaid work

- Women's paid and unpaid work in an era of retrenchment
- Continuum of paid & unpaid health/care work
- Defining care work & the care economy
- Critique of community care
- Household structure and unemployment in South Africa
- Provision of health and welfare services in South Africa

Measuring and valuing unpaid care work time

- Measuring unpaid care work time – the SNA and time use data
- Valuing unpaid care work time – four input-related approaches

SOUTH AFRICA'S NATIONAL HOME-BASED CARE/COMMUNITY-BASED CARE GUIDELINES

Home-based care is defined as “*the provision of health services by formal and informal caregivers in the home, in order to promote, restore and maintain a person’s maximum level of comfort, function and health including care towards a dignified death*”

No mention that informal caregiving falls on women and is unpaid



Input-related approaches to valuing unpaid care work

Average earnings The average earnings in the economy as a whole is estimated and assigned to each hour of unpaid work (separately for males and females)

Opportunity cost The normal wage or income from paid work that the person would be doing if they were employed is used

Generalist The mean wage of workers performing similar work to the unpaid work is used (ie. domestic work, personal care work)

Specialist For each activity the wage earned by paid workers is used (eg. for time spent cooking, wage of a chef is used)

KIDS 2004 QUALITATIVE STUDY

Fieldwork:

- between June 2004 and March 2005
- in 2 urban and 4 rural KIDS research sites
- in 6 households within each research site
- by three field researchers
- incorporating various themes (care, CSG, orphans, livelihoods, family)

Modified extended case study method:

- each field researcher lived in 2 research sites for 2 one-month periods
- repeated visits to study households, building trust and rapport
- formal and informal interviews, discussions, observation, events mapping

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KIDS 2004 QUALITATIVE STUDY – CARE COMPONENT

- 3 households in each research site contained an ill adult who received care from one or more household members (family caregivers)
- HIV-positive status volunteered for / by 7 of the 19 ill people
- 9 of the ill people had died non-accidentally by end of fieldwork period
- detailed time-use and financial cost information obtained from 19 family caregivers of 17 ill people in 16 households
- methodology developed to count unpaid care work time information

$$\begin{aligned} &\text{CAREGIVER'S LABOUR TIME} \\ &+ \\ &\text{HOUSEHOLD'S FINANCIAL COSTS} \\ &= \\ &\text{COSTED UNPAID CARE PROVISION} \end{aligned}$$

FINDINGS – MEASURING UNPAID CARE PROVISION

- 18 of 19 main caregivers female
- Caregivers from within the household not the 'community'

Average counted unpaid care work time per ill person:

- 10.1 hours per day by household members (range 3.0 – 25.8 hrs)
- 9.7 hours per day by female caregivers
- 11.4 hours per day by household & non-household members
- Personal care and physical help each take $\frac{1}{4}$ of time

FINDINGS – VALUING UNPAID CARE PROVISION

- Methods: average earnings, opportunity cost, generalist, specialist
- September 2004 LFS to obtain mean & median hourly earnings
- Hourly earnings applied to time spent in unpaid care work
- Using all methods, mean & median earnings, value of labour time ranges from R5 to R627 per day
- Generalist method using the proportionate approach and median earnings rates is most appropriate to the poor in KwaZulu-Natal

FINDINGS – COUNTING FINANCIAL COSTS

- All financial costs relating to the ill person's care and paid for by household members totalled
- Daily financial costs range from R3 to R78 per ill person
- Monthly financial costs range from R84 to R2,391 per ill person
- State grants only income source to two households: 58% & 45% of household income spent on ill person's care in these households
- Daily costs range from one tenth to 3 times the indigence level and the value of the Old Age Pension

CAREGIVER'S LABOUR TIME

+

HOUSEHOLD'S FINANCIAL COSTS

=

COSTED UNPAID CARE PROVISION



COSTED UNPAID CARE PROVISION (monthly, Rands)

<u>Method</u>	<u>Lowest</u>	<u>Highest</u>
Average earnings-employed	527	5,556
Average earnings-self-employed	414	4,649
Opportunity cost-education	452	4,841
Opportunity cost-employment	258	4,158
Generalist (proportionate)	<u>585</u>	<u>7,619</u>
Specialist	1,544	21,126

COMPARING COSTED UNPAID CARE PROVISION AND COSTS OF SIMILAR INTERVENTIONS

Intervention	Low-cost unpaid care provision as % of low-cost intervention	High-cost unpaid care provision as % of high-cost intervention
Private home-based care	7.1	26.4
Public inpatient care	19.6	6.1
NPO inpatient care	2.9	17.8
NPO home-based care	0.5	1.3

SPENDING ON UNPAID CARE PROVISION

- Number of AIDS sick in KwaZulu-Natal in 2005 = 181,694
- Multiplied by monthly low cost (R585) = R106 million
- Multiplied by monthly high cost (R7,619) = R1,384 million
- Monthly health and welfare spending in KwaZulu-Natal = R2 million
- Evident how little spending is committed by the provincial government and how much is committed by unpaid caregivers in the home
- Unpaid care provision is subsidizing the provincial and national economies

CONCLUSIONS

The findings show that the resources spent on health and welfare through the state, the private sector and the not-for-profit sector are only a small part of health and welfare provision

Most of the health and welfare work in relation to care for AIDS sick people is undertaken for no pay by female family members

If these costs are taken into account in what ways does this change how the health and welfare sectors are understood?

Costing unpaid care provision makes it possible to recognize unpaid caregivers as part of a comprehensive health approach, part of a district health team

- Policy of HCBC rests on assumption of 'ubuntu', but the findings show that family caregivers are constrained and need support
- Family caregivers pose moral responsibilities to the state
- Family caregivers are productively participating in society but are not treated equitably with others in society who are also productively participating (eg. paid workers)
- In the United Kingdom the people in the study would either be in hospital or receiving a home nursing service

What are realistic options for support to family caregivers in South Africa?

POLICY OPTIONS

- Improve and expand the service of home- and community-based care
- Revive link between health services and home-based care
- Make payment for caregiving
 - to the cared-for
 - to family caregivers
 - to community caregivers
- Reinforce mass-based employment under the EPWP



Assessing the Changing Dynamics of Child Grants in South Africa in the Context of High HIV/AIDS Mortality: A Projection to 2015

Hayley McEwen & Ingrid Woolard

SALDRU

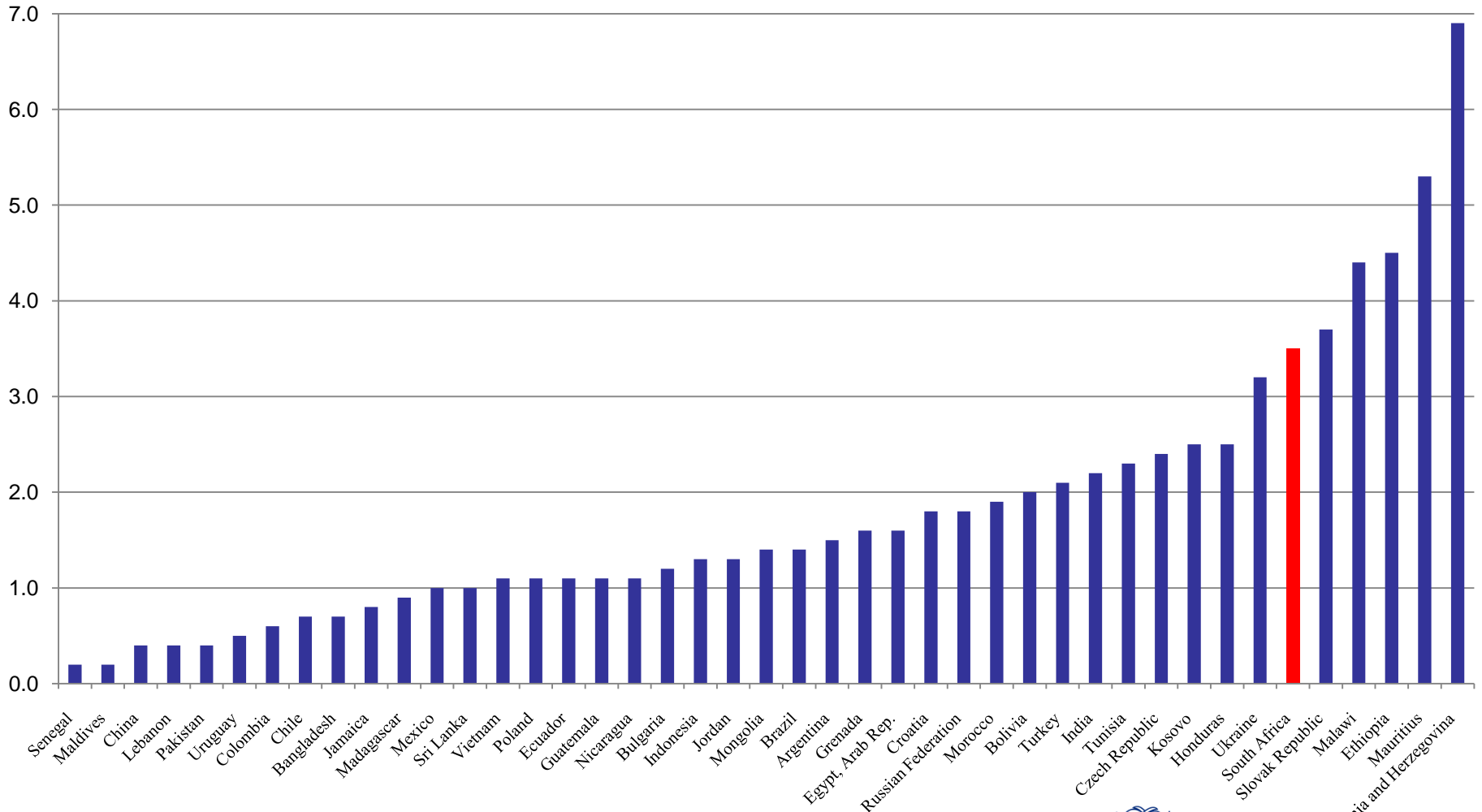
18 May 2010

Aim

- Given demographic change, what are the implications for child grants, without changing the structure of the current system?
- As the number of orphans increases, should we be considering extending the Foster Care Grant to all orphans? What are the other options?

Comparative social assistance spending

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Demographic projections

According to ASSA 2003 model projections:

- HIV/AIDS incidence peaked in 1998 and prevalence plateaus around 2010.
- Mortality continues to increase between 2008 and 2015 for the 25-40 age bracket, particularly females.
- Infant mortality decreases between 2008 and 2015 but almost all other ages under 18 suffer increased mortality (particularly those aged between 10 and 15).
- Fertility (TFR) has been declining over the last 4 decades and is expected to continue doing so at a decreasing rate until 2015.

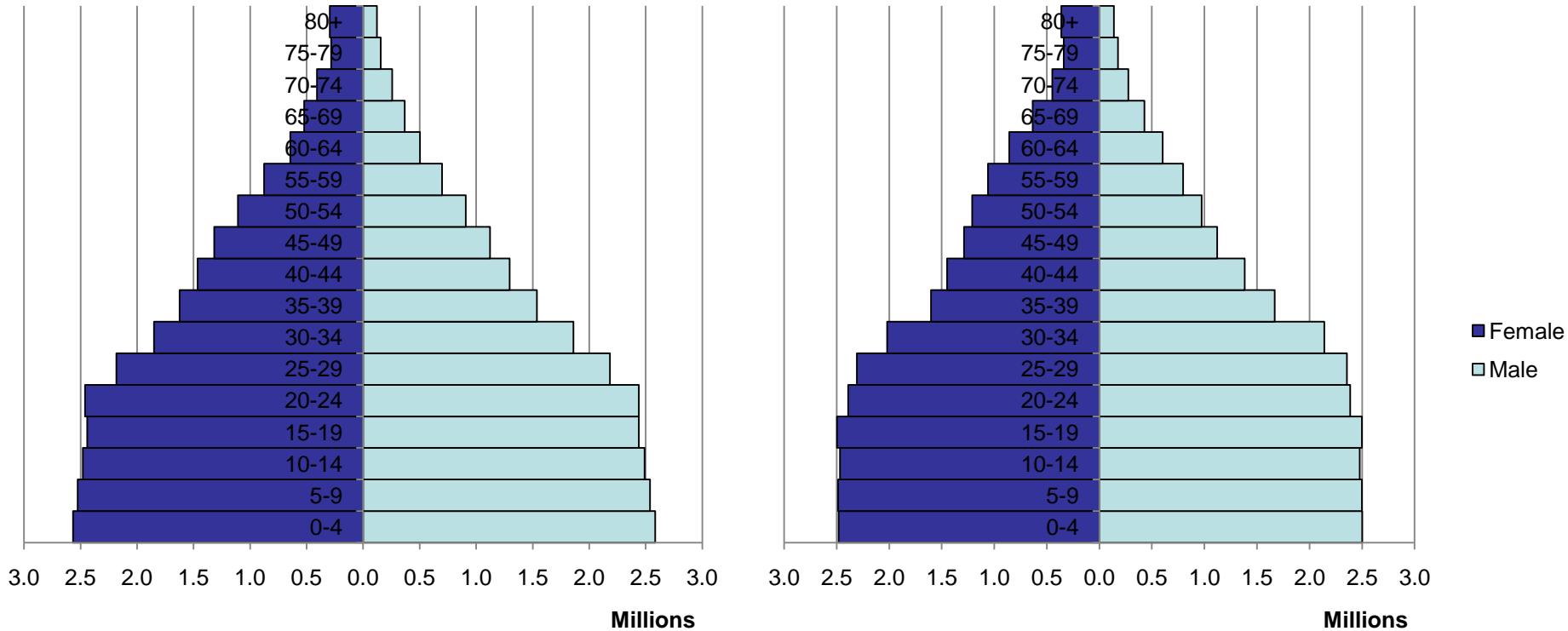
	Incidence	Prevalence	E(0)	IMR	CMR	Adult mortality (M)	Adult mortality (F)	TFR
2008	1.2%	11.6%	50.5	44.6	68.9	61.3%	53.0%	2.43
2015	1.1%	12.0%	50.3	39.9	63.9	60.0%	55.8%	2.25

- The population appears to be aging between 2008 and 2015, with a decreasing proportion of young people and an increasing proportion of the elderly.
- The population aged 11 and under decreases and the population of teenagers increases.
- The female population outstrips the male population across all ages except 0-15 and 25-35 in 2008, and 0-20 and 25-40 in 2015.

Population pyramids

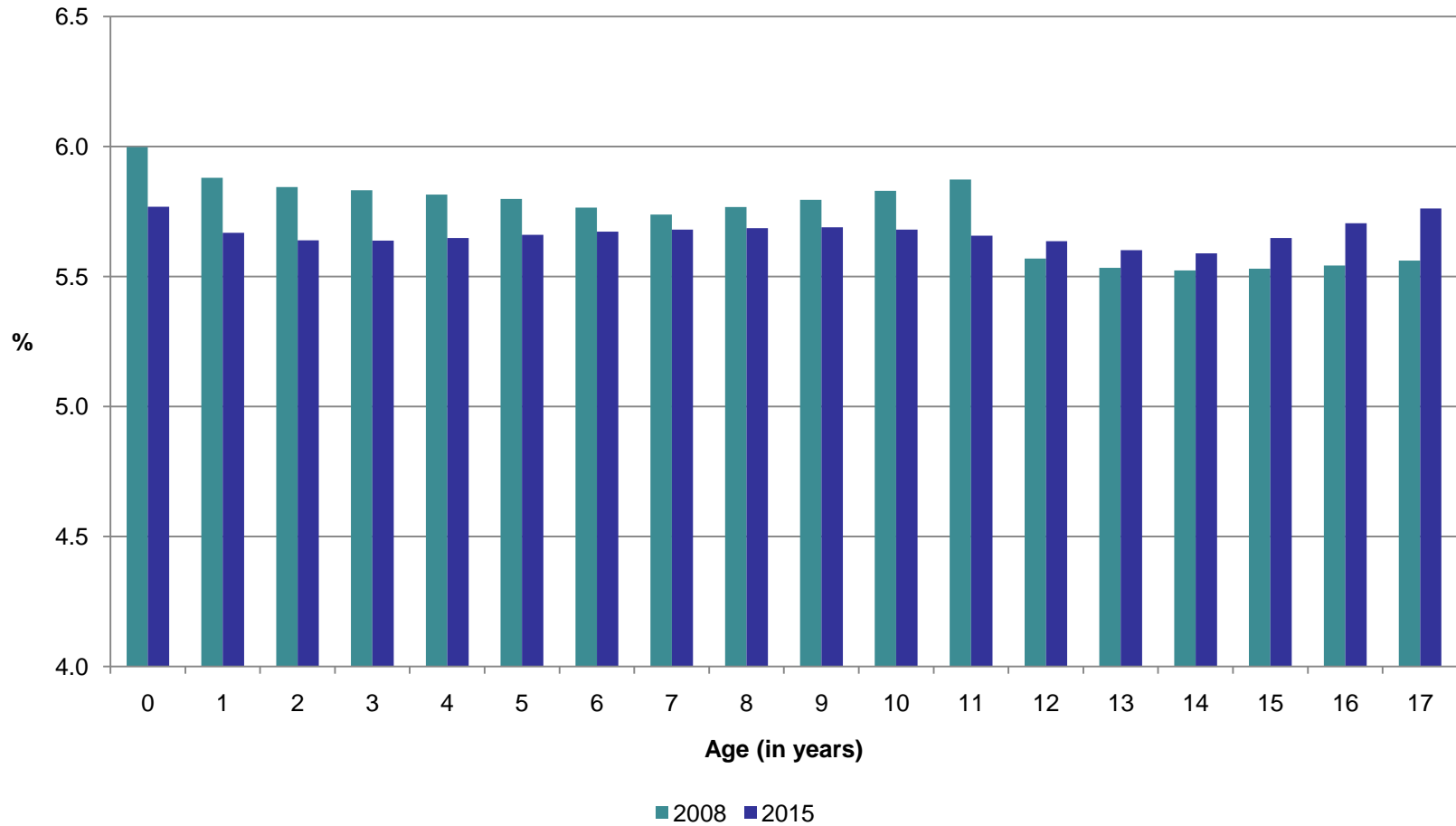
2008

2015



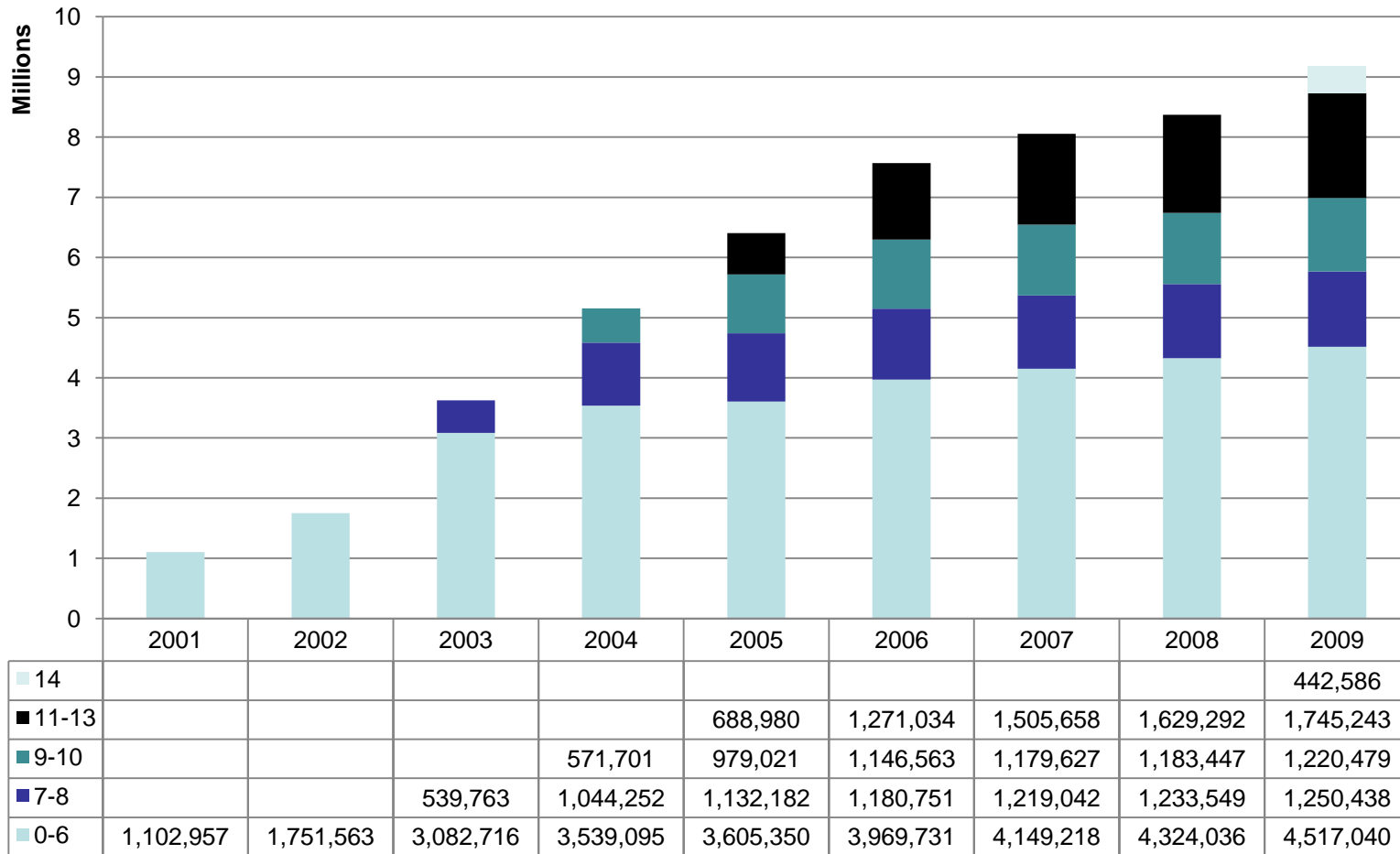
Source: ASSA 2003 model (full)

Child proportions in 2015



Source: ASSA 2003 model (full)

Beneficiaries of Child Support Grant

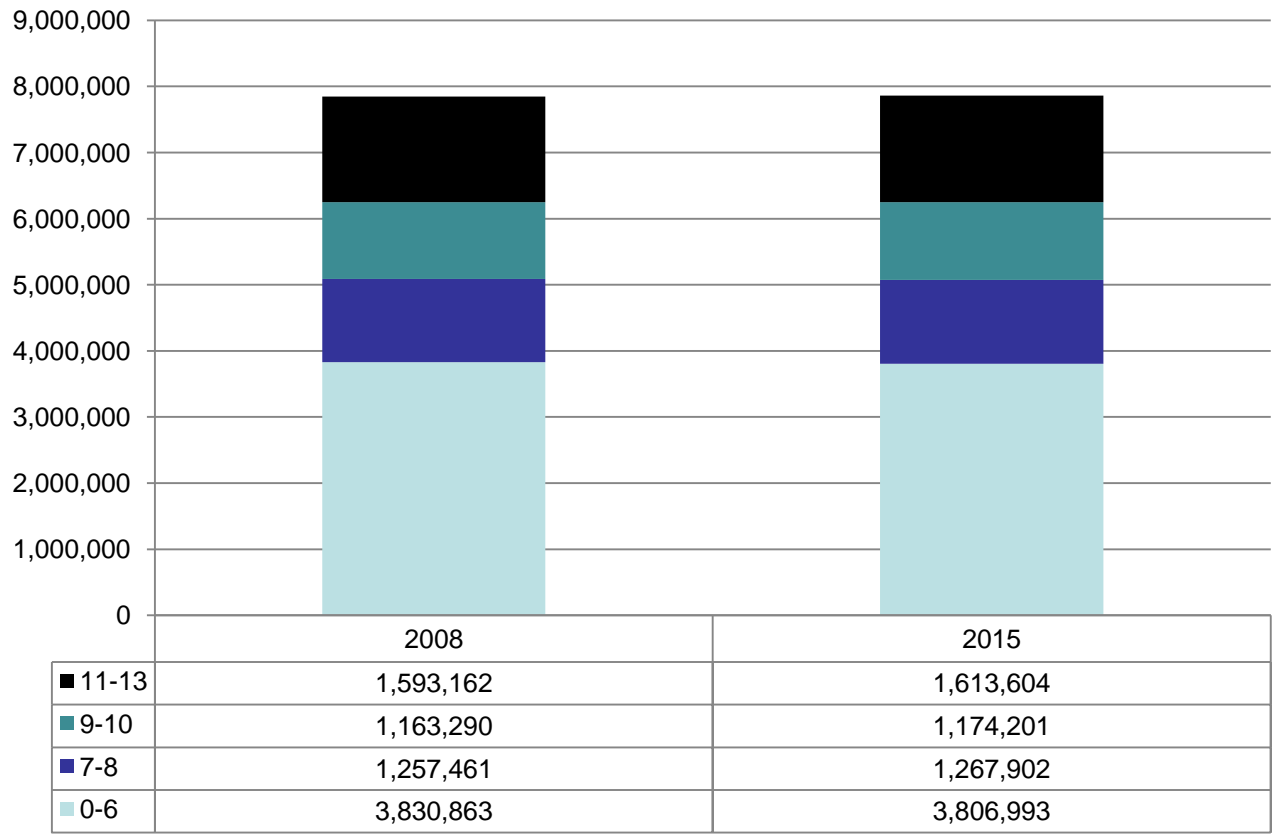


Source: SASSA

Re-weighting for 2015

- We used the ASSA 2003 model projection for the year 2015 to create the input vector.
- Then used Martin Wittenberg's STATA version of SAS's "CALMAR" for calculating weights to estimate the population at 2015.
- Create new weights for the NIDS data by age-sex-race-province to resemble the ASSA projections for 2008 and 2015.

Child Support Grant beneficiaries assuming no changes in eligibility rules



Source: NIDS (2008)

Characteristics of beneficiaries

According to NIDS:

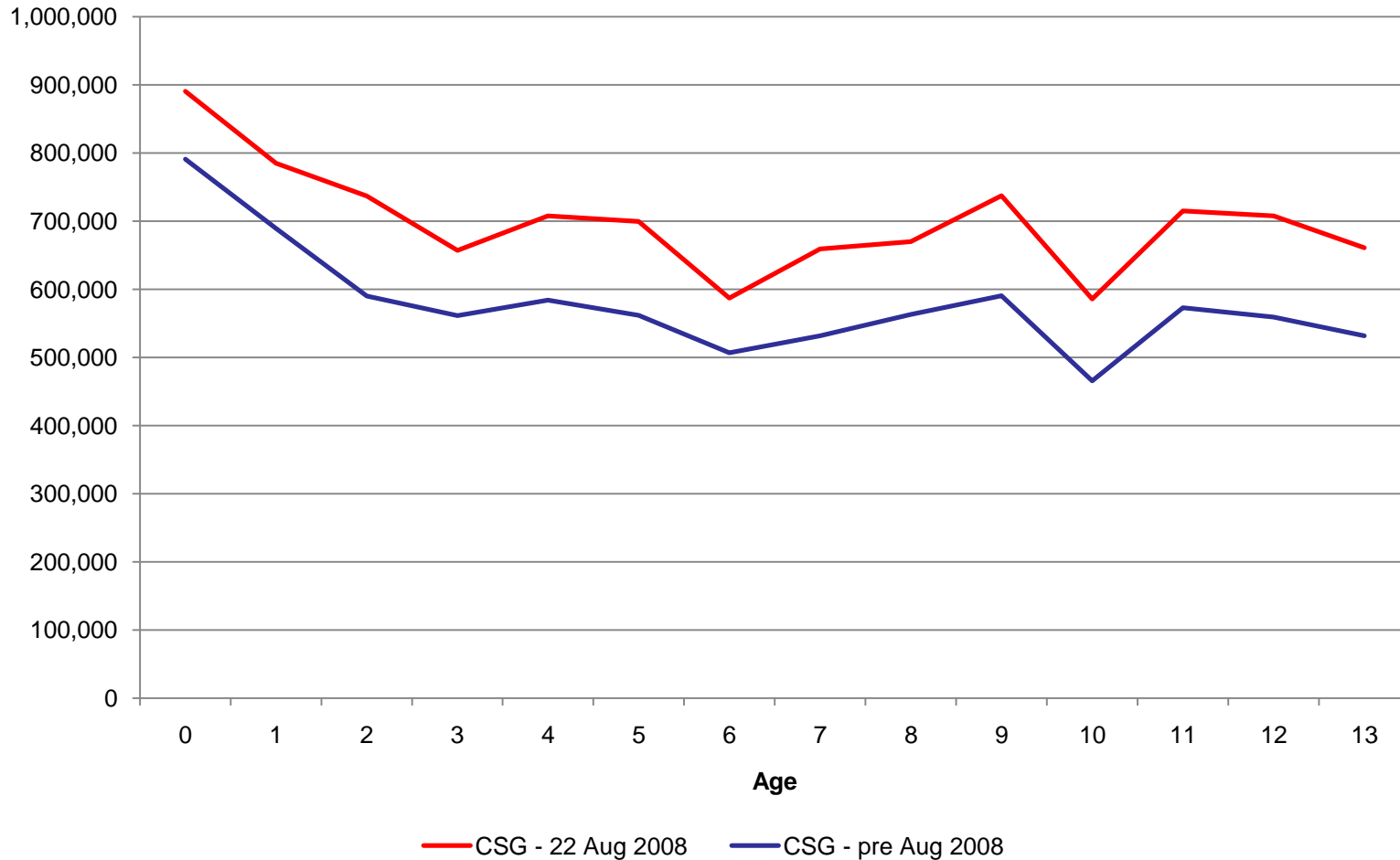
- Almost 60% of all children under 14 receive some form of cash transfer from the state, the vast majority receiving the CSG.
- 82% of child grants are received by one of the child's parents, 12% are received by grandparents and 3% are received by an aunt or uncle.
- Less than 2% of grant beneficiaries are teenagers; one-third are in their 30s.

	15-19	20-29	30-39	40-49	50-59	60-69	70-79	80+	Total
2008	112,313	1,816,523	2,252,308	1,541,933	616,880	301,173	87,760	8,960	6,737,850
%	1.7	27.0	33.4	22.9	9.2	4.5	1.3	0.1	100
2015	111,555	1,805,407	2,293,948	1,532,300	677,613	361,408	95,428	10,181	6,887,840
%	1.6	26.2	33.3	22.2	9.8	5.2	1.4	0.1	100

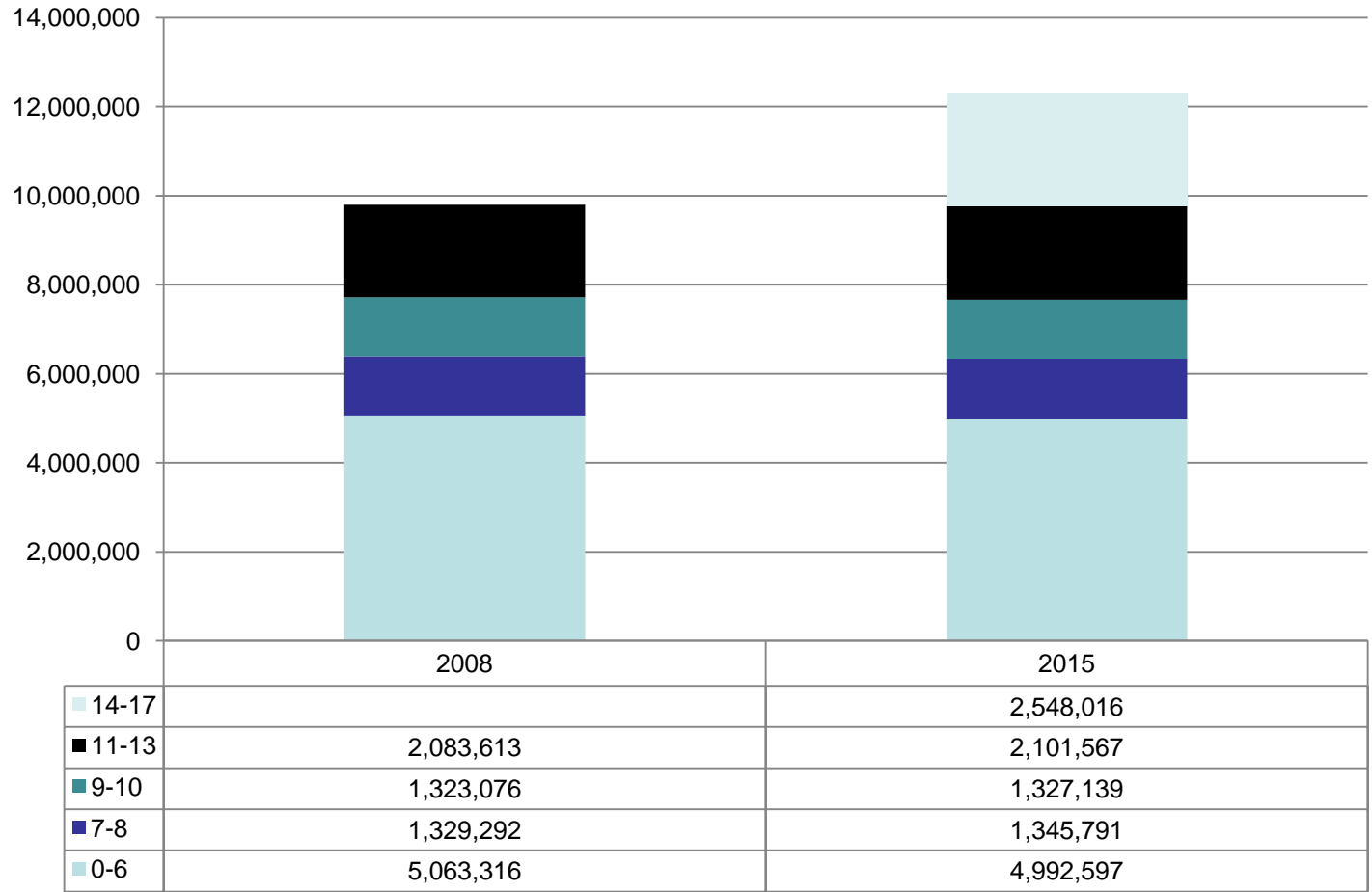
Change in means testing

- On 22 August 2008 the means test was updated for the first time since the inception of the Child Support Grant.
- Income of single caregiver and dual income of spouses previously subject to the same threshold level, plus differential thresholds for urban and rural.
- New means test is set at 10 times the size of the grant for single caregivers, and dual income of spouses is subject to double the threshold.
- This results in an immediate increase in eligible children of 1.7 million.
- Children aged 9 and above enjoy the largest increases in eligibility.

Simulated eligible under the old and new Child Support Grant means test



Simulated eligible for Child Support Grant



Eligibility by grant type

2008:

Eligible for the CSG	CSG	FCG	CDG	No Grant	Total
Yes	6,532,853	200,428	49,937	2,642,871	9,799,297
No	142,454	31,264	861	1,722,665	2,052,699
Total	7,844,776	256,692	57,677	4,961,040	13,751,948

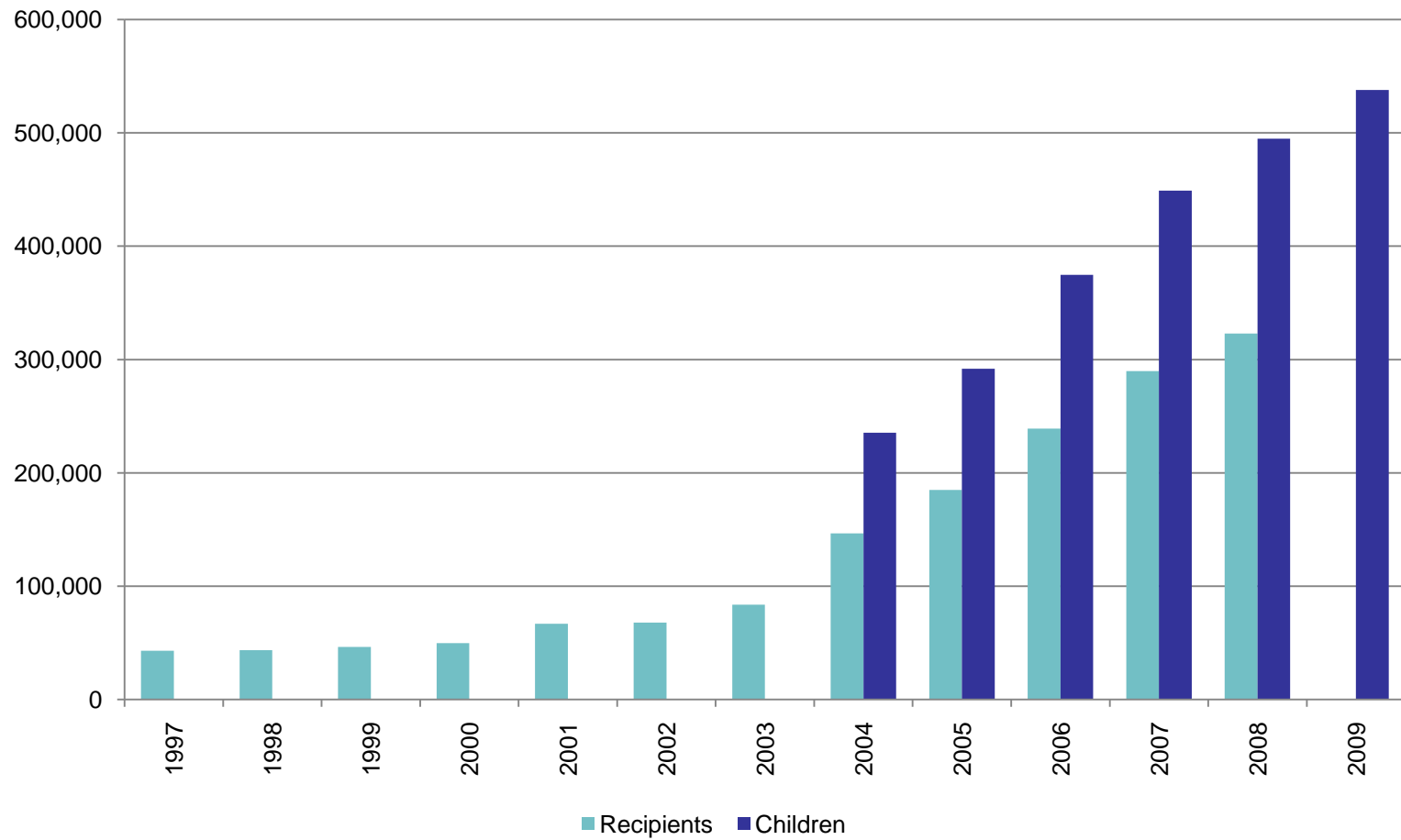
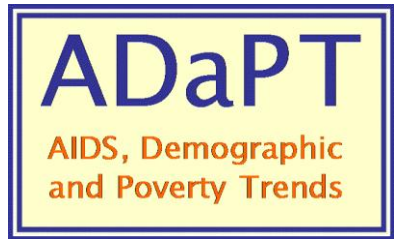
- Over 2.6 million children under 14 are simulated as eligible for the Child Support Grant and don't receive any form of grant.
- A very small proportion of Child Support Grant recipients are simulated as not being eligible.

Source: NIDS (2008)

Foster Care Grant

- Designed for “at risk” children that have been placed in the custody of foster parents in terms of the Child Care Act.
- Worth almost 3 times more than the Child Support Grant, at R710 p.m.
- The expansion of the HIV/AIDS pandemic has led to large growth in recipients, outpacing population growth.
- Caution: according to SASSA, 44% of Foster Care Grants go to children older than 14, which means NIDS is not a particularly good source of data..

Foster Care Grant beneficiaries



Foster Care Grant beneficiaries

- 11% of Foster Care Grant beneficiaries would not meet the Child Support Grant means test, while 79% would (10% are missing income data).
- 10% of Foster Care Grant beneficiaries have non-resident caregivers.
- Only 28% of children receiving a Foster Care Grant report a foster parent as the recipient.
- The most frequent recipient reported is the child's grandparent (36%) and 12% report an uncle or aunt.
- Most children receiving the Foster Care Grant are orphans, with 42% dual orphans, 22% maternal orphans and 10% paternal orphans totalling 74%.

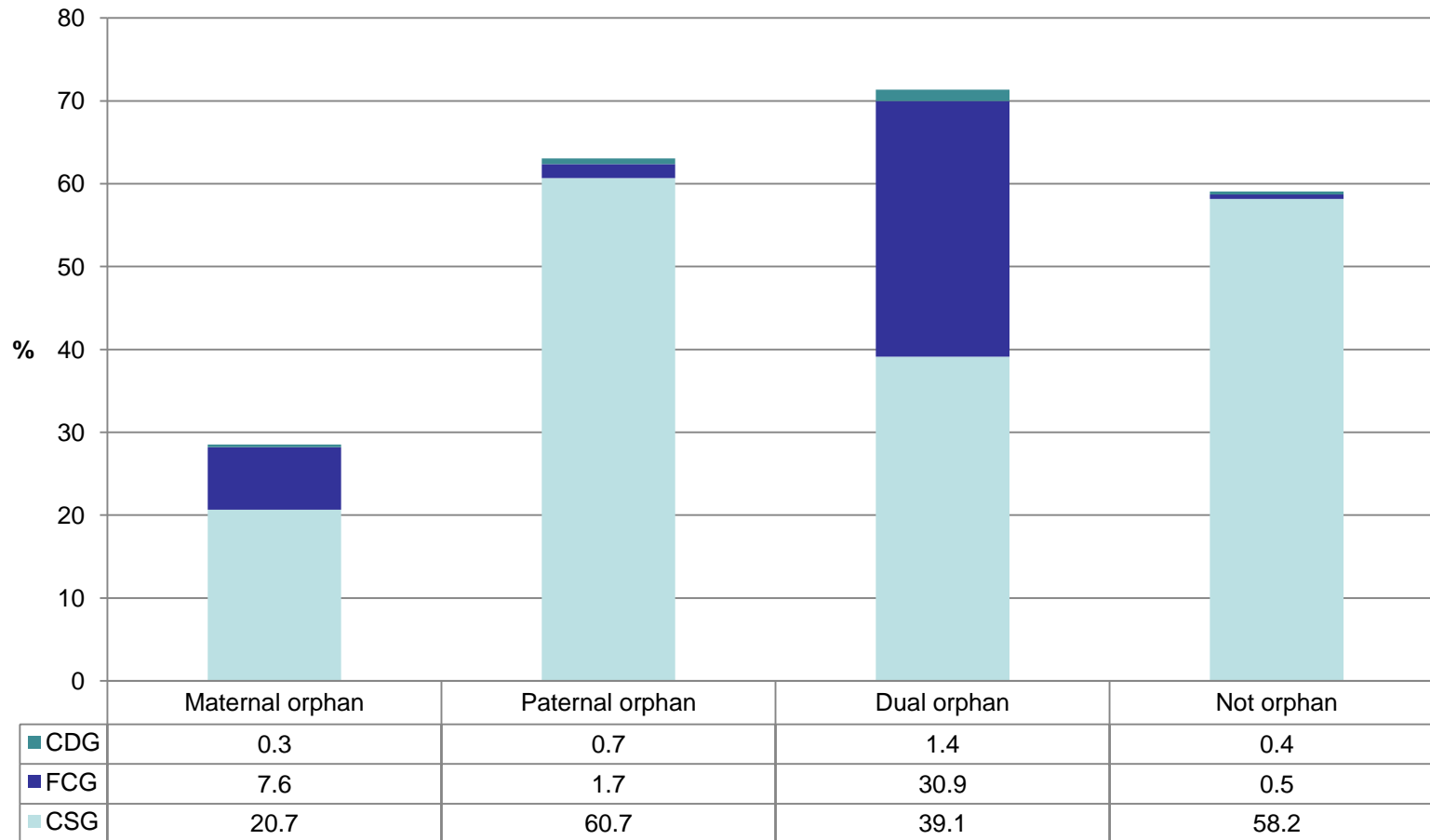
Orphanhood and grants

- Court process involved in getting the FCG is burdensome. What if all orphans could receive it and the only requirement was a death certificate?

	Maternal	Paternal	Dual	Not orphan
2008	1,193,327	2,487,048	628,196	13,792,710
2015	1,290,738	2,417,674	1,126,809	13,084,906
% growth	8.2	-2.8	79.4	-5.1

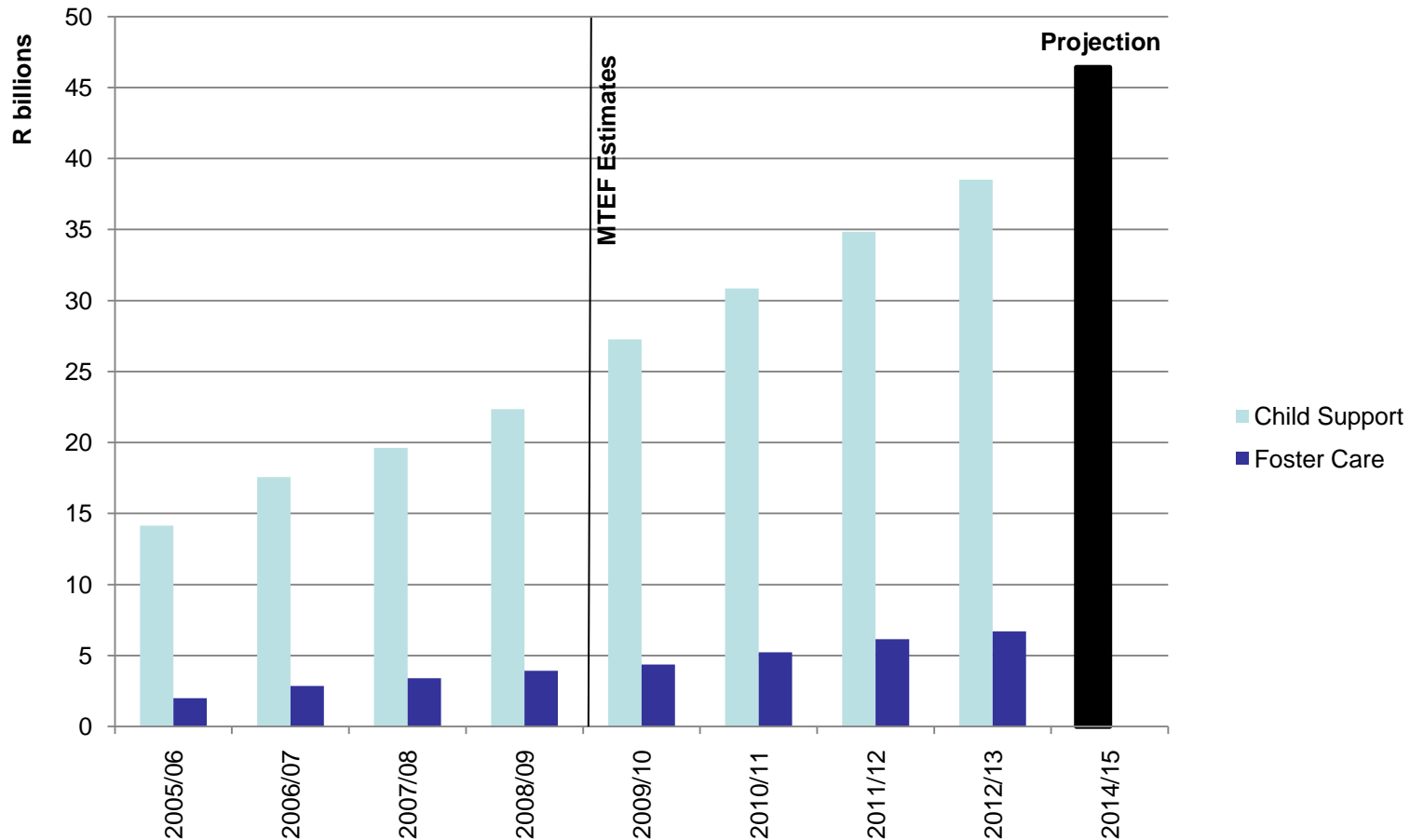
- ASSA 2003 model estimates 4.3 million orphans in 2008 and predicts 4.8 million by 2015.
- This orphan growth is largely fuelled by increased maternal mortality.

Proportion of orphans under 14 receiving a grant



- Currently all orphans under 14 are more likely to receive a Child Support Grant than a Foster Care Grant.
- Average caregiver income is astonishingly low for orphans; R297 for dual orphans, R774 for maternal orphans and R792 for paternal orphans.
- In comparison, the average caregiver income for children with both parents still living is R1935

Child grant cost projections



Source: 2007-2010 Budget Reviews, South African National Treasury.

Simulated orphan grant (all)

- Making the Foster Care Grant available to all orphans would increase the number of children receiving it in 2008 from 500,000 to 4.1 million.
- At R630 per month in 2008, the cost of transfers would increase from around R3.9 billion to R35 billion per year.
- Of course 1.3 million of these children would formerly have been receiving Child Support Grants, saving R3.3 billion per year.
- That still leaves an annual bill of R31.7 billion per year.
- But it also results in 4 million of the poorest children receiving almost three times as much grant income.

Simulated orphan grant (dual)

- Making the Foster Care Grant available to only dual orphans would double the number of children receiving it in 2008 to 1 million.
- At R630 per month in 2008, the cost of transfers would potentially double to R7.6 billion per year.
- Of course, 150,000 of these children would formerly have been receiving the CSG, with a saving of slightly under R400 million.
- Thus the annual expenditure on Foster Care Grants could be expected to increase to R7.2 billion per year.

Increasing take-up of the Child Support Grant for maternal orphans

ADaPT
AIDS, Demographic
and Poverty Trends

- There are currently more than 600,000 maternal orphans (73%) not receiving any grant, a vastly higher proportion than for any other group.
- 500,000 of these (83%) are simulated eligible with the new means test.
- Most of this lack of take-up is due to the difficulties involved in proving who the child's caregiver is when the mother is deceased.
- If these issues could be resolved, expenditure on the Child Support Grant would increase by R1.5 billion to around R29 billion per year.

Conclusion

- Not much population growth expected under 18 years due to lower fertility.
- Growth in the size and cost of the Child Support Grant likely to continue, driven by progressive increases in age limit.
- Caregivers expected to become older as general population ages.
- Foster Care Grant has grown rapidly due to increased adult mortality.
- Orphans are growing due to increased maternal mortality.
- From a policy perspective, which makes sense – an orphan grant (=FCG) versus efforts to improve CSG coverage of maternal orphans?