ability to pay 185, 186, 191, 192, 193–4
abstinence 17–18, 19
acquired immunodeficiency syndrome see AIDS
Adimora, A.A. 86, 90
Africa
condom use 85
HIV prevalence rates 37
see also South Africa; Sub-Saharan Africa
age discrimination 192, 199
age of first sex 95, 96, 98
agricultural households, impact of HIV adult death 68–74
consumption, long run 71–2
household’s downward spiral 68–9
labor supply, short run 70–71
parents’ finances 73
small-scale farm 69–70
women’s land rights 72–3
agricultural policies 75–7
AIDS 3, 11
complexity of 11
deaths worldwide 15
alcohol prohibition 65
Aldy, J.E. 154, 156
Aliber, M. 72
antioxidants 41–2
antiretroviral drugs (ARVs) 13, 15, 67, 75, 77, 196
black market 193
cost-effectiveness analysis 141, 144–5
rationing, criterion for 192
South Africa, use of 47
toxicity 75
Arnesen, T. 140
ARVs see antiretroviral drugs (ARVs)
Asia, HIV prevalence rates 37
Auvert, B. 192
Badru, A. 188
Bailey, R.C. 66, 67
Barnett, T. 56, 57
Beegle, K. 70, 71, 72
behavioral disease, HIV/AIDS as 175
see also risky behavior
black market antiretroviral drugs 193
blood donors with HIV 199
blood transfusions 4
Bloom, D.E. 180, 181, 182, 183, 184
Boily, M.-C. 65
Bollinger, L.A. 95
Boozer, M.A. 20
Botswana, income inequality 56
Brazil 60, 84, 85
bread program cost–benefit analysis 27–9
breastfeeding 76
Brent, R.J. 53, 55, 57, 58, 59, 60, 62, 64, 82, 117, 118, 122, 125, 126, 142, 143, 144, 147, 149, 150, 152, 158, 159, 161, 162, 169, 186, 189, 202, 203
budgets, variable 169–70
burden of disease 143, 200–201
Burkino Faso, HIV transmission knowledge 12–13
calorie increase, effect on HIV/AIDS 51–2
Cambodia, impact of HIV on agricultural households 73
Cameroon, HIV transmission knowledge 13
Canning, D. 195
capital punishment 66
Caraël, M. 84
casual partners 81, 82, 84
Caulfield, L.E. 49
CBA see cost–benefit analysis (CBA)
CD4 T cells 45, 66, 192–3
CEA see cost-effectiveness analysis (CEA)
Centers for Disease Control and Prevention (CDC) budget 112
choices in policy-setting, need for 7–10
circumcision 65–7, 178, 205
Cohen, J. 86
commercial sex workers 4, 56, 65, 122, 163
common sense 3, 171, 205
commodification 172–5
competitive markets 117–19, 126
concurrency 84–8, 91, 198
African Americans 86–7
Sub-Saharan Africa 85–6
condom promotion 16, 85, 122, 169
condom social marketing program
117–18, 122–3, 127, 169, 202–3
distribution weights 187–8
private benefits and costs 123–5
social benefits and costs 125–6, 169
condom use 81–2, 95–8
and education 62
and low income 60
in marriage 62
consumer sovereignty 177–8, 179
consumer surplus 124
contingency valuation 114
cost minimization 99, 128–31
as a cost–benefit analysis 128–9
costs, what to include 129–30
strengths and weaknesses 130–31
TB treatment in South Africa
132–3
conclusions 135–6
costs, estimating 133–5
drug costs 135
patient costs 134
cost–benefit analysis (CBA) 4, 8, 164, 201, 205–6
distribution weights 186–90, 194
economic efficiency 176–9
equity 185–90
first level (101) 27–9
HIV testing, evaluation 180–84
private and social perspectives,
comparision 182–3
private perspective 180–82
social perspective 182
second level (201) 30–32
social inclusiveness 201–5
value judgements 176, 177, 190
cost-effectiveness analysis (CEA) 99,
137–8, 195
antiretroviral drugs 141, 144–5
as cost–benefit analysis 138–9
revealed preference approach 141–2,
145
strengths 139
weaknesses 139–40, 169–70
costs 99–100
cost-utility analysis 137
Côte d’Ivoire, sexual partners 85
counterintuitive results
abstinence 17–18, 19
marriage 18–19
testing 19–20
Creese, A. 138, 195
crop selection 76
cross-section analysis 55
DALYs see disability adjusted life years (DALYs)
Dayton, J. 197
De Walque, D. 12, 13, 61, 66
death penalty 66
Democratic Republic of Congo as
origin of epidemic 82
denial 11, 46–7, 198–9
developing countries, HIV prevalence
rates comparison 54–5
diminishing marginal utility, law of
119, 157
disability adjusted life years (DALYs)
50, 110–12, 137, 140, 142, 143, 199
discordant couples 158
discrimination 192, 193
disease progression 192–3
distribution weights 186–7, 189–90,
194
condom social marketing project
187–8
criticism of 188–9
Drain, P.K. 65

economic efficiency 176–9
consumer sovereignty 177–8, 179
willingness to pay 176
education and HIV 58–63
African Americans 87
and condom use 62
education/income positive relation 62–3
female education
evaluation 150–52
HIV positive link 53, 58–9
intervention types 150
neutral relation 61
positive/negative link paradox 59–61, 62–3
universal primary education 61
education programs 105, 150, 178
threshold analysis 105–8
effects, threshold estimate 106–7
intervention 105–6
threshold value 107–8
education vaccine 61, 62
effectiveness of interventions 95–100
elderly people
discrimination 192
and HIV 199, 203–4
Eley, B.S. 47
The End of Poverty (Sachs) 4–5
England, R. 200
epidemics, types of 3–4, 132
Epstein, H. 56, 85, 87, 122
equity
ability to pay 185–90
distribution weights 186–7
non-price rationing 191–4
time as rationing system 191–2
willingness to pay 120, 185–6
Europe, HIV prevalence rates 37
external costs 130
Fawzi, W.W. 44, 46
dependent education 58, 63
effectiveness evaluation 150–52
and HIV positive relation 53, 58–9
see also women
fixed budgets 169–70
free radicals 41–2
gender
and HIV transmission knowledge 12–13
and HIV transmission rates 81, 82
gender inequality 201–2
generalized HIV epidemics 4, 36
genital ulcers 80
GFATM 15, 143, 145
Ghana, HIV transmission knowledge 13
Gillespie, S. 4, 41, 68, 75–6
Glied, S. 180, 181, 182, 183, 184
Global Fund to Fight AIDS,
Tuberculosis and Malaria see GFATM
Glynn, J.R. 60, 61
Gray, P.G. 64
Grüne-Yanoff, T. 157
Guinness, O. 173
Haacker, M. 160
Haddad, L. 41
Halperin, D.T. 85
Hargreaves, J.R. 60, 61
harm reduction interventions 175, 178
health care
firms’ packages 181
non-price rationing 191–4
healthy-looking people 12–13, 16
HelpAge International 199
heterosexual transmission of HIV 5, 38, 39, 78–9
high-risk groups 4, 17, 39, 86, 90
interventions, effectiveness of 95–8, 122
targeted for intervention 197
testing 20, 182
see also risky behavior
HIV 3–4
HIV education, evaluation 105–8
effects, threshold estimate 106–7
intervention 105–6
threshold value 107–8
HIV prevalence rates
developing countries, comparison 54–5
Muslim countries 64
United States 38–9
worldwide 36–8
HIV testing 183–4
counterintuitive results 19–20
and the elderly 203–4
private evaluation 180–82
private and social perspectives,
comparison 182–4
social evaluation 182
see also voluntary counseling and testing (VCT)

HIV transmission 4
and donor instructions 178
and education 105–8
healthy-looking people 12–13
knowledge of 11–13, 16
malnutrition, direct role of 41–2
malnutrition, indirect role of 42–3
mother-to-child 4, 105, 138
sexual behavior 5, 78–83
sexually transmitted diseases, role in 80
and testing 20
HIV/TB dual epidemic 132
Holtgrave, D.R. 106, 109, 110, 112
home-making services, value of 174
homosexual men, micro-nutrient deficiencies 45
see also MSMs
housework, value of 173–4
human capital approach 146–9, 168
female primary education evaluation 150–52
strengths and weaknesses 149
voluntary counseling and testing 160, 162
human immunodeficiency virus see HIV
hunger see malnutrition

illegal activities 174, 175
immune system 11, 41, 44, 79, 132, 199
incarceration 86–7, 90, 198
income
and education relation 62–3
and HIV 53–7, 60, 86
negative relation 54, 57
positive relation 54, 55–6, 57, 60
income inequality 56–7
India, HIV cases 14
information programs 150, 178
intrerracial sex 90
interventions 4, 74, 85
and agricultural policy 75–7
as commodities 173–4
details, importance of 168–9
education, types of 150
effectiveness of 95–100
priority-setting

burden of disease 199–200
denial 198–9
difficulties of 4
labeling 195–8, 200
social inclusion 201–4
intravenous/injecting drug users (IDUs) 4
HIV education 105–6, 107–8
HIV transmission 39, 90
micro-nutrient deficiencies 44, 45
Irwin, A. 13, 14
Islam and HIV rates 53, 64–7
Jayne, T.S. 69
Kadiyala, S. 4
Kagera see Tanzania: agricultural households, impact of HIV
Karpiak, S.E. 199
Kenya
agricultural households, impact of HIV
on small-scale farm 69–70
on women’s land rights 72–3
HIV transmission knowledge 12–13
land ownership 72–3
male circumcision 66
marriage and HIV levels 19
sexual partners 84, 85
women’s land rights 72–3
Knodel, J. 73
knowledge of HIV transmission 11–13, 16
Kremer, M. 17–18
Kretschmar, M. 85
Krutilkova, S. 72
Kumaranyake, L. 132, 134
labeling, evaluation by 195–8, 200
Lagarde, E. 87
Latin America, HIV prevalence rates 37
Laumann, E.O. 89
Lesotho, sexual partners 84, 85
Lewis, S. 9–10, 15, 26, 202
localized HIV epidemics 4, 36
Loevinsohn, M. 75–6
Mackay, J.L. 66
macro-malnutrition 41, 42, 51–2
malaria 8, 79
intervention analysis 30–32
Malawi, agriculture and HIV link 75
male circumcision 65–7, 178, 205
males having sex with males (MSMs) 4, 39, 67, 86, 90, 97
malnutrition 41, 57, 79
and antiretroviral drugs 75
calorie increase, effectiveness 51–2
cause of AIDS claim 46–7
as consequence of HIV/AIDS 68–9
at country level 50–51
and HIV, vicious circle 41–2
HIV transmission, direct role in 41–2
HIV transmission, indirect role in 42
measures of 47, 49–50
see also micro-nutrient deficiencies
Manila, concurrent partners 85
marginal benefits 27–8, 30–31, 117–19
marginal costs 27–8, 30–31, 117–18
markets 117–19, 126
marriage
and concurrency 87
condom use in 62
as HIV risk factor 18–19
Mbeki, Thabo 46
MEASURE 79
medication see antiretroviral drugs (ARVs)
Mexico, willingness to pay for vaccine study 113–16
micro-malnutrition 41
see also malnutrition
micro-nutrient deficiencies 42, 44, 45
micro-nutrients 41, 44
multivitamin supplementation 44–7
vitamin A 44, 46, 47–8
Millennium Development Goals (MDGs) 5, 21, 24
feasibility as economic issue 24–5
feasibility as political issue 25–6
Miller, T.R. 155, 157
mining industry 56, 86, 133, 154, 157
mitigation 77, 169, 178
monogamy 84, 85
Moore, M.L. 154
Morris, M 85
mosquitoes 79
mothers with HIV 4, 46, 47, 193
mother-to-child transmission of HIV 4, 105, 138
MSMs see males having sex with males (MSMs)
multivitamin supplementation 44–6
South Africa, use of 46–7
Muslim countries and HIV negative relationship
alcohol prohibition 65
capital punishment 66
male circumcision 65–7
Muslim population and HIV rates 53, 64
myths 13–15, 197–8
National Health Service (NHS) 191, 192
National Institute on Drug Abuse (NIDA) 105
nations’ values 174
Nattrass, N. 15, 47
network analysis 88–9
African American HIV rates 89–91
Ngamvithayapong, J. 132
NHS see National Health Service (NHS)
Niger, religion and HIV rates 53–4
Nigeria, HIV cases 14
non-governmental organizations (NGOs) 7, 133
non-price rationing of health care 191–4
Nord, E. 140
North America, HIV prevalence rates 37
North Carolina Cooperative Agreement Program (NC CoOP) 105
Norton, E.C. 105, 106, 107, 108
nutrition see malnutrition; micro-nutrient deficiencies; micro-nutrients
nutrition supplements 77
cost–benefit analysis 27–9
obesity 56–7
occupational fatality rates 154
Oceania, HIV prevalence rates 37
opportunity costs 8, 130, 133
Oster, E. 80, 82, 84
Setting priorities for HIV/AIDS interventions

Oster simulation model 80–83
Over, M. 56, 58
Owens, D.K. 112
oxidative stress 42

panel data 55
parasitic diseases 42, 43, 79
partnerships see sexual partners
patient costs 174
people living with HIV/AIDS (PLWA) 36–7, 201, 203
Philipson, T.J. 19, 20
Pisani, E. 39, 75, 77, 197
policy-setting, difficulties 4–5
Posner, R. 19
Potts, M. 122
poverty 5, 54, 77, 80, 91
preferences 141–2, 164, 178
non-price rationing 194
of people living with AIDS 203
willingness to pay 185, 189, 201
of women 202–3
pregnant women
with HIV, decline in 15
micro-nutrient deficiencies 44, 45, 72
multivitamin supplementation 44–6
President’s Emergency Plan for Aids Relief (PEPFAR) 15
prevention programs 14, 95–8, 195–6, 199
priority-setting
burden of disease 199–200
denial 198–9
difficulties of 4
labeling 195–8, 200
social inclusion 201–4
“prison industry” 86
see also incarceration
private costs 130
Propper, C. 192, 193
public–private partnership (PPP) and cost minimization 132–6
Qualls, N.L. 106, 109, 110, 112

Race Against Time (Lewis) 9–10, 202
Rath Health Foundation 47
rationing of health care
non-price methods 191–4

socio-economic criteria 193
by time 191–2, 193
religion as determinant of HIV see Islam and HIV rates
resource constraints 9–10
revealed preference approach 141–2, 145
Rio de Janeiro, sexual partners 84, 85
risky behavior 11, 19–20, 54, 65, 175, 178

see also high-risk groups
Rispel, L. 56
Rosen, S. 191, 192, 193, 194
rural–urban migration 56
Sachs, J. 4–5
Sampson, L.A. 90
scaling up 196–7
Schelling, T.C. 9, 153
schistosomiasis 43, 79
Semba, R.D. 41, 42, 44, 45
serial monogamy 84, 85
Setswe, G. 56
sexual behavior
concurrency 84–7
HIV transmission 5, 78–83
networks 88–91
Oster simulation model 80–83
sexual networks 88–9
sexual partners
casual 81, 82, 84
concurrency, African Americans 86–7
concurrency, Sub-Saharan Africa 85–6
serial monogamy 84, 85
sexually transmitted diseases (STDs) 43, 60, 80
sexually transmitted infections (STIs) treatment 95, 97, 98
Shelton, J.D. 85, 198
Sinanovic, E. 132, 134
Singapore, sexual partners 85
social benefits
of condom social marketing program 125–6, 169
of HIV testing 182–3
social complexity of AIDS 11
social costs 130, 133–4, 135, 183
social evaluation 180, 182–4
social inclusiveness
  elderly with HIV 203–4
  people living with AIDS 203
  women and HIV 201–3
socialism 183
South Africa
  antiretroviral drugs (ARVs) 15, 47
denial of HIV as cause of AIDS 46–7
  HIV cases 14, 37
income inequality 56
  multivitamins as AIDS cure 46–7
  obesity 56–7
TB treatment, cost minimization 132–3
  costs, estimating 133–5
  drug costs 135
  patient costs 134
vitamin A in HIV prevention 47–8
Squire, L. 186
Sri Lanka, concurrent partners 85
STDs see sexually transmitted diseases (STDs)
stigma 11, 91, 169
Stillwaggon, E. 42, 43, 44, 51, 52, 55, 56, 78, 79, 80
STIs see sexually transmitted infections (STIs) treatment
stunting 47, 49–50
Sub-Saharan Africa
  concurrency 85–6
  condom use 82
  elderly women, vulnerability to HIV 199
female education and HIV 53, 59, 61
HIV determinants 53–4
HIV prevalence rates 37, 80–83
HIV transmission 78–9, 80, 81, 82
  hunger as consequence of HIV/ AIDS 68–9
malnutrition 50–51
marriage and HIV 19
parasitic diseases 43
sexual behavior and HIV
  transmission 81, 82
  and United States, HIV comparison 90–91
  switching values 101
Tang, A.M. 41, 42, 44, 45
Tanzania
  agricultural households, impact of HIV
  on consumption, long run 71–2
  on labor supply, short run 70–71
  agriculture and HIV link 75
  condom social marketing program
    117–18, 122–3, 127, 169, 202–3
    distribution weights 187–8
  private benefits and costs 123–5
  social benefits and costs 125–6, 169
  condom use 85
  education
    of females 60, 147–9
    and HIV 60, 62–3
    primary 147–9
  elderly women, vulnerability to HIV 199
  HIV transmission knowledge 12, 13
  income 55, 57, 188
  multivitamin supplementation 44–6
  sexual partners 84, 85
  voluntary counseling and testing
    158–64
  targets 21–3
    desirability of 21–3
    feasibility 21
    as economic issue 24–5
    as political issue 25–6
  TB treatment, cost minimization 128–9, 132–6
  TB/HIV dual epidemic 132
  T-cell counts 45, 46, 66, 192–3
  testing see HIV testing; voluntary counseling and testing (VCT)
Thailand
  agricultural households, impact of HIV 73
  condom use in brothels 122
  sexual partners 84, 85
THIS 12
Thomas, J.C. 90
“3 by 5 Initiative” 21, 26
threshold analysis 101–2
  HIV avoidance, benefits 109–12
  benefits, calculation 112
Setting priorities for HIV/AIDS interventions

- benefits, threshold estimate
  - 109–10
- DALY, estimating 110–12
- HIV education, evaluation 105–8
- effects, threshold estimate 106–7
- intervention 105–6
- threshold value 107–8
- HIV/AIDS vaccine, cost 113–16
- benefits, contingency valuation 114
- costs, threshold estimate 114
- willingness to pay, estimating 114–16
- strengths 103
- weaknesses 103–4
- time as rationing system 191–2
- time series studies 55
- trade-offs 8–10, 76
- transmission see HIV transmission
- transport infrastructure 76
- Tshabalala-Msimang, Dr. 46–7
- Uganda 19, 61, 122
- UNAIDS 15, 16, 19, 196
- HIV/AIDS data 35–6
- underweight 47, 50
- United Kingdom 155
- HIV contracted abroad 14
- HIV transmission knowledge 16
- National Health Service (NHS) 191, 192
- United States
- and Africa, HIV comparison 90–91
- African Americans
  - concurrency 86–7
  - education of 87
  - HIV prevalence 87, 89–90, 198
  - sexual networks 89–90
  - antiretroviral drugs (ARVs) 67
  - condom use 81–2
  - denial of HIV/AIDS problem 198
  - female HIV/AIDS rates 14
  - HIV prevalence rates 38–9, 80–83, 87, 198
- HIV testing 19
- HIV transmission 39, 81–2
- incarceration 86–7, 90, 198
- malnutrition, measures of 49–50
- micro-nutrient deficiencies 44
- occupational fatality rates 154
- sexual partners 81, 84
- value of a statistical life 155
- unprotected sex 11, 19, 105, 160, 163
- value judgments 176, 177, 190
- value of a statistical life approach 153–5
- foregone benefits 160, 163
- strengths and weaknesses 156–7
- voluntary counseling and testing 158–64
- cost–benefit analysis 160–64
- cost–benefit results 161–2, 163–4
- costs 160, 163
- effectiveness, estimating 158–9
- van der Tak, H. 186
- Viscusi, N.K. 154, 156
- vitamin A 44, 45, 46, 47–8
- vitamins
  - shortage of 41, 42, 47–8
  - South Africa, HIV policy 46–7
- supplementation 43, 44–8
- voluntary counseling and testing (VCT) 158–64
- cost–benefit analysis of 160–64
  - benefits 160
  - cost–benefit results 161–2, 163
  - costs 160, 163
- effectiveness, estimating 158–9
- human capital method 162
- see also HIV testing
- Voluntary HIV-1 Counseling and Testing Efficacy Study Group 159
- Walker, C. 72
- wasting 47, 49
- Whiteside, A. 56, 57, 113
- Whittington, D. 113, 114, 115
- widows’ land ownership 72–3
- willingness to pay (WTP) 117–21, 172
- condom social marketing program 122–3, 127
  - private benefits and costs 123–5
  - social benefits and costs 125–6, 169
  - and economic efficiency 176
- elderly and HIV 204
- equity concerns 120–21, 185, 186
and non-price rationing 191–2
people living with AIDS 203
social inclusion 201
strengths 119–20
vaccine 113, 114–16
weaknesses 120–21, 185, 186
women and HIV 202–3
Wilson, Phill 86
*The Wisdom of Whores* (Pisani) 197
women
education 58, 63
    effectiveness evaluation 150–52
    and HIV positive relation 53, 58–9
elderly, vulnerability to HIV 199
and HIV 201–3
land ownership 72–3
mothers with HIV 4, 46, 47, 193
preferences 202–3
*see also* gender
workplace programs 96, 98
World Bank 9, 58, 62, 82, 150
    lending program 197
World Food Program (WFP) 10
World Health Organization (WHO) “3 by 5 Initiative” 21, 26
WTP *see* willingness to pay (WTP)
Yamano, T. 69
Youm, Y. 89
Zambia 19, 84
zero price 173, 175