INDEPTH centres in South Africa

Agincourt: Kathleen Kahn
Africa Centre: Kobus Herbst
Dikgale: Marianne Alberts
What do HDSSs have in common?

- **Defining and registering** a population
- **Following** community over time
- **Recording** all vital events
South African centres - rural

<table>
<thead>
<tr>
<th>Centre</th>
<th>Start</th>
<th>Population</th>
<th>Households</th>
<th>Communities</th>
<th>Language</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agincourt</td>
<td>1992</td>
<td>110,000</td>
<td>20,000</td>
<td>31 villages</td>
<td>Xitsonga</td>
</tr>
<tr>
<td>- Mpumalanga</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Dikgale</td>
<td>1995</td>
<td>35,000</td>
<td>6,700</td>
<td>15 villages</td>
<td>Sesotho</td>
</tr>
<tr>
<td>- Limpopo</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Africa Centre</td>
<td>2000</td>
<td>85,000</td>
<td>11,000</td>
<td>scattered HHs + settlement</td>
<td>isiZulu</td>
</tr>
<tr>
<td>- KwaZulu-Natal</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

INFANTS & CHILDREN | ADOLESCENTS | ADULTS | OLDER

[Images of infants, adolescents, adults, and older adults]
Expectation of Life at Age 15

\[ e_{15} \text{ (years)} \]

Year

Agincourt
Africa Centre

INDEPTH Network
Expectation of Life at Age 15

Year


Agincourt
Africa Centre

Bor J et al. Science 2012
Expectation of Life at Age 15

Year

Agincourt

Africa Centre

INDEPTH Network
Difference in HIV prevalence between Agincourt and Africa Centre

Difference in HIV Prevalence: Agincourt–AC

Age (years) vs. Difference in HIV Prevalence (percent)

- Male (blue squares)
- Female (red squares)

INDEPTH Network
Mortality transition over 15 years, rural SA 1994 - 2009

Temporary (labour) migration: 1994 – 2011

Mother’s migration protective
- remittance benefit
- differential access to HIV/AIDS treatment

Collinson et al. 2006
Local fast foods
Time bomb ticking: Precursors of adult disease

~ 20 - 30% stunting in early life

Overweight/obesity in adolescent girls approaching 25% in late teens

Kimani-Murage et al. BMC Public Health 2010
## Cardiovascular risk: rural adults 50+

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
<td>Male</td>
<td>Female</td>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td>Abdominal obesity (%)</td>
<td>26</td>
<td>67</td>
<td>28</td>
<td>74</td>
<td>34</td>
<td>84</td>
</tr>
<tr>
<td>Hypertension (%)</td>
<td>50</td>
<td>56</td>
<td>57</td>
<td>57</td>
<td>64</td>
<td>69</td>
</tr>
</tbody>
</table>
### Social roles older women

<table>
<thead>
<tr>
<th></th>
<th>All Households</th>
<th>Households with NO woman 60+</th>
<th>Households with woman 60+</th>
</tr>
</thead>
<tbody>
<tr>
<td>Households with at least one child under 15</td>
<td>77.7%</td>
<td>77.8%</td>
<td>76.2%</td>
</tr>
<tr>
<td>Household with at least one fostered child</td>
<td>15.4%</td>
<td>12.1%</td>
<td>26.5%*</td>
</tr>
<tr>
<td>Household with at least one maternal orphan</td>
<td>5.5%</td>
<td>4.7%</td>
<td>15.9%*</td>
</tr>
<tr>
<td>Total N</td>
<td>11,665</td>
<td>8,994</td>
<td>2,671</td>
</tr>
</tbody>
</table>

*Schatz 2008*
Policy response

• District/Provincial
• National
• Global
Access and coverage: Child care grants

Poorer households less access
• application barriers (lack vital documents)

Evidence led to Home Affairs intervention with major increase in coverage

Lives saved from stroke = 6400
Saves $300,000 annually

Preventing deaths among people under 60 provides large economic savings for the nation

Global policy impact

- WHO infant feeding guidelines
  - mother-to-child transmission of HIV during exclusive breastfeeding
  - Coovadia et al. Lancet 2007

- WHO policy on early initiation of ART
  - high coverage of ART associated with decline in risk of acquiring HIV infection
  - Tanser et al. Science 2013
Building researchers and research leadership

<table>
<thead>
<tr>
<th></th>
<th>Graduates</th>
<th>Current</th>
</tr>
</thead>
<tbody>
<tr>
<td>PhD</td>
<td>30</td>
<td>43</td>
</tr>
<tr>
<td>Masters</td>
<td>54</td>
<td>8</td>
</tr>
</tbody>
</table>
Funding partners - HDSS

South Africa
• Universities: Witwatersrand, KwaZulu-Natal, Limpopo
• Medical Research Council
• Anglo American Chairman’s Fund

International
• Wellcome Trust, UK
• National Institutes of Health (NIH), US
• William and Flora Hewlett Foundation, US
• VLIR-UOS (Vlaamse Interuniversitaire Raad-Univ Devt Cooperation), (Belgium)