

MRC





Health inequity through lens of multimorbidity and urbanisation

Tolu Oni

Epidemiology Unit

Clinical Senior Research Associate, University of Cambridge

Honorary Associate Professor, Public Health, University of Cape Town

Co-Chair, Global Young Academy

Tolullah.oni@mrc-epid.cam.ac.uk



Outline

- 1. Multimorbidity, urbanization and deprivation
- 2. The role of data and integrated approaches to prevention
- 3. Innovative health governance and atypical partnerships
- 4. Evolving skillsets and the role of public health science

1. Multimorbidity, urbanization and deprivation





Epidemiological transition

- Falling incidence and mortality from infectious diseases
- Rise in chronic "degenerative" conditions

BUT

- Reality is one of protracted transition in many LMIC
- Emerging NCD epidemics alongside high rates of infectious disease

Risk factors contributing to morbidity (DALYs) in South Africa Fraz-

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Childhood undernutrition	7895	9904	11547	5727	2015	1C.)	'Ye	ale	18	191	Do	83	CS7	"De	УC УС
Unsafe water source	4649	5798	6014	3113	Unsafe sex	16953	20628	25509	12475	23264	14137	19339	22960	10570	7469
Suboptimal breastfeeding	3580	4670	5305	2782	High body-mass index	3149	2914	3657	3399	2545	3161	3488	2677	4290	3424
Unsafe sanitation	2778	3915	3760	995	High fasting plasma glucose	3110	3174	3581	3098	2789	3186	3336	2461	4350	3289
No handwashing with soap	2760	3318	3847	1987	High systolic blood pressure	2827	2692	3884	3061	2124	2773	2865	2635	4250	3019
Alcohol use	2718	2441	2982	3277	Alcohol use	2420	2749	2677	2464	1810	2374	2805	1753	3920	2736
Smoking	2703	2182	3610	3573	Smoking	2306	2488	3112	2268	1339	1418	1772	1359	5702	4443
High systolic blood pressure	2496	1942	3211	2893	Ambient particulate matter pollution	1113	919	1593	1344	827	1117	1119	1078	1455	1025
fuels	2320	2907	3172	1141	Childhood undernutrition	1001	1211	1836	814	811	1201	773	1720	2083	530
High body-mass index	2277	1804	2431	2750	Diet low in fruits	988	1031	1186	999	798	972	1025	806	1561	1122
High fasting plasma glucose	2008	1703	2025	2234	Intimate partner violence	942	1831	1193	752	964	614	955	1018	869	544
pollution	1804	1468	2604	2089	Unsafe water source	938	951	1367	742	923	1384	1196	1153	1506	404
Secondhand smoke	939	1102	1284	664	Impaired kidney function	833	783	988	925	689	843	835	738	1122	844
Diet low in fruits	862	714	968	973	Diet low in whole grains	779	738	933	824	649	771	841	634	1155	841
Iron deficiency	738	763	679	580	High total cholesterol	737	654	929	810	548	592	678	642	1263	1007
Impaired kidney function	698	560	772	833	Diet low in nuts and seeds	711	660	858	772	574	650	732	575	1085	831
Diet low in whole grains	647	480	722	757	No handwashing with soap	700	706	1104	595	632	1018	866	849	1098	315
Vitamin A deficiency	638	766	792	530	Low physical activity	658	777	915	549	623	407	713	373	1117	964
Unsafe sex	620	594	768	675	sehold air pollution from solid fuels	594	815	513	157	603	1565	1025	571	994	144
High total cholesterol	586	410	700	682	Diet low in vegetables	555	508	710	607	428	508	571	479	935	630
Diet low in nuts and seeds	558	402	620	665	Iron deficiency	539	545	531	472	688	569	548	540	556	400
Diet low in vegetables	520	371	624	610	Drug use	449	476	553	444	473	405	533	458	440	326
Low physical activity	504	475	621	464	Unsafe sanitation	443	551	621	184	485	916	663	611	633	59
Intimate partner violence	487	674	487	476	Suboptimal breastfeeding	398	505	771	370	278	356	264	717	893	244
Drug use	476	342	520	720	Diet high in processed meat	377	360	432	401	321	369	402	289	515	424
					Secondhand smoke	349	334	408	391	275	513	414	450	324	132

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Chronic infectious and NCD multimorbidity



Deprivation and multi-morbidity clustering



Weimann A, Dai D, Oni T. Soc Sci Med. 2016;163:144–156





Re-thinking strategies to improve population health equitably

- Impact of high disease burden on economic development
- Cannot afford to solely treat through epidemic
- Cannot afford to have siloed health systems focused largely on acute episodic care
- Many factors that influence disease lie outside health sector



2. Data matters; but what data?

HEALTH SERVICES	EXPOSURES	INTERMEDIATE OUTCOMES	LONGTERM OUTCOMES
FOOD	Sugar Salt Greenhouse emissions	Eating behavior Obesity	Diabetes Hypertension / CVD Cognitive function Cancer Climate change
	Pest/vectors Poisoning	Physical activity Obesity	Infectious disease Injury Cerebrovascular disease
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harnessed to POSITIVELY influence health?

Air pollution Greenhouse emissions

HABITATION (&planning)

- Damp Thermal comfort Ventilation Social cohesion opportunities Physical activity opportunities Air pollution
- Physical activity Obesity Sleep & stress Social cohesion H/care episodes H/care admissions

H/care episodes H/care admissions Disease control Chronic Resp Disease Climate change

Acute Resp disease Chronic Resp Disease Hypertension / CVD Mental ill-health Infectious disease

HEALTHCARE (prophylaxis, treatment, palliation) Availability Accommodation Affordable Accessible Acceptable

Precision Public Health approach

Can we harness data for health creation in context of chronic disease prevention and management?

Need health equity surveillance systems that integrate health and SDH data

Support development and delivery of interventions with population precision

THE CONVERSATION AFRICA PILOT

Academic rigour, journalistic flair

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Africa's health won't improve without reliable data and collaboration

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3. Innovative health governance and atypical partnerships for health equity

Dimensions of governance

- Actors
- Agency
- Accountability

- intersectoral collaboration for effective prevention
- need systems-based whole of society approach for collective responsibility

4. Evolving skillsets -the role of public health science

