Rural access, health and disability in sub-Saharan Africa; lessons for transport policy and practice from recent transport services research

Transport, health and disability are interlinked on many levels, with transport availability directly and indirectly influencing health, and health status influencing transport options. This is especially the case in rural locations of sub-Saharan Africa, where transport services are typically not only high cost, but also less frequent and less reliable than in urban areas. This special issue presents papers concerned with three different aspects of the transport/health/disability nexus – firstly the linkages between access to transport and obstetric emergencies, secondly those between disability, access to transport and service access (including health service access), and thirdly the linkages between transport and disability associated with road traffic injury.

The papers were all presented during a full day session on rural access issues at the UK African Studies Association’s biennial conference at Leeds University in September 2012, sponsored by the UK Department for International Development [DFID]-funded Africa Community Access Programme [AFCAP]. The session, entitled, ‘Making new connections: mobilities, roads and rural access in sub-Saharan Africa’, was focused on presenting new and on-going research on rural access issues in sub-Saharan Africa. AFCAP funded the attendance of a number of Africa-based presenters, including authors of three of the four papers published here. Following this session, a further meeting was convened a few days later in London. This enabled an extended discussion of key themes presented at the conference, particularly transport and maternal health.

The first of the four papers in this special issue (by Miriam Orcutt), examines the potential of a transport services intervention to reduce obstetric emergencies and improve maternal mortality figures in eastern Zambia. This paper is a baseline study focused on conditions in the study area prior to a planned intervention (a motorcycle-ambulance service). The second paper (Cathy Green, Fatima Adamu and Idris Abdul Rahman) is also focused on maternal health, but in this case it documents the role that a transport union is currently playing in increasing rural women’s access to emergency maternal health care in northern Nigeria. The third paper (Nite Tanzarn), entitled ‘Social identity, citizen voice and rural access in Uganda’, is concerned with the varying accessibility needs of particular (potentially mobility-disadvantaged) population groups, with a specific emphasis on women and men with disability, pregnant women and pregnant women with disability. The way that disability affects access to transport in rural Africa has figured relatively rarely in transport studies. This paper, which emphasises how broader patterns of gender discrimination reinforce the constraints that disabled and pregnant women face in rural areas, will hopefully draw greater attention to and further research in the disability and transport field. The final paper in the collection (by Deepani Jinedasa, Karen Zimmerman, Bertha Maegga and Alejandro Guerrero) approaches health and disability issues rather differently, in this case from a road traffic injury perspective. It documents the disproportionately severe impact that road traffic crashes have on particularly vulnerable road users - pedestrians, bicyclists and motorcyclists - on three low-volume rural roads in Tanzania. The way these four papers contribute to recent and on-going transport services research in the health, disabilities and road traffic injury fields is (briefly) elaborated below, following preliminary comment regarding the development of both transport and health researcher interests in the field.

The specific role that transport can play in shaping access to health facilities has been evident to transport specialists for many years. It was clearly demonstrated in an early study of linkages between hospital utilization and transport in Kenya by Tony Airey (1992), though further in-depth research on the relevance of transport services (availability and type), travel time and travel costs to access to health facilities was rather slow to emerge. However, work - both by transport and health specialists...
has recently been gathering pace in diverse aspects of health care, from vaccination and child health to maternal health, contraception and ARV treatment. The important research gap in understanding linkages between mobility and health has been highlighted, above all, by growing concerns over reaching the MDG on reducing maternal mortality (by 75% by 2015), given the fact that Africa has some of the world’s highest maternal mortality rates. The role of transport in emergency maternal health contexts, clearly identified in the Three Delays Model (Thaddeus and Maine 1994), is being pursued both in the transport sector (e.g. Babinard and Roberts 2006) and also increasingly by health specialists. Two papers in this special issue – both focused on improving maternal health and reducing maternal emergencies (Orcutt; Green et al.) - not only reflect this expanding interest but also demonstrate the benefits of close collaboration between health and transport researchers. Miriam Orcutt, working in the health field, collaborated with Developing Technologies (a transport-focused NGO), while Fatima Adamu came from a transport research background to work with Idris Abdul Rahman and Cathy Green, whose focus is primarily on health issues.

Distance to health facilities, associated travel time and cost issues are common themes in recent literature and are considered in some detail in the papers in this special issue by Orcutt and Tanzarn. Distance to health facilities per se is a key constraint where transport services are limited and high cost, such that women’s lack of resources, in particular, may require them to walk. It is encouraging that the importance of travel time is now gaining greater recognition from health-focused researchers. Tanser et al. (2006), for instance, in a field study of physical access to primary health care in KwaZulu-Natal South Africa (a region where 65% of rural homesteads travel one hour or more to attend the nearest clinic), found a significant logistic decline in usage with increasing travel time (see also Gabrysch et al. 2011). The especial significance of this point for women, given their common time-poverty, but especially for pregnant and disabled women, is emphasised in the paper by Tanzarn, which stresses the importance of listening to commonly excluded voices (and associated field observation). She points out how the physically disabled and infirm may take much longer to cover the same distance that a young fit person will take, citing walking speeds well below the average for a pregnant woman or Person With Disability (PWD), depending on the type of disability. Consequently, when confronted with health problems, these disadvantaged groups will often resort to self-medication, using medicines purchased from drug shops located within their communities.

Orcutt, whose work also demonstrates the importance of listening to local voices, describes how women about to give birth, in the Zambian villages which she studied, may have to walk up to 40 kms to reach the nearest clinic, in the absence of transport. Even where transport by ox-cart is available, many women prefer to deliver at home rather than risk travel due to the delays associated with the ox-cart slow speed of travel (up to 4-5 hours to reach the clinic, possibly longer if the oxen are working in the field and have to be brought to the village before moving with the woman). The value of bicycle-, motor cycle- and jeep- ambulances for speed of access to clinics seems to be widely recognised - but costs of usage may be prohibitive, depending on the rules prevailing at different health facilities. Other important constraints may also prevail, both in the home community and related to perceptions about treatment at the clinics, and can impact on journey decision-making. The significance of transport cost as a key constraint is strongly emphasised in Orcutt’s paper in the context of pregnant women’s delivery choices in her Zambian study villages. Many women deliver at home to avoid transport costs, even where adequate transport services can be made available. Travel cost may impose a significant barrier to care and treatment uptake in other contexts apart from maternal emergencies, a point also taken up in a number of recent studies of health-seeking behaviour, for instance regarding low patient uptake of antiretroviral (ARV) therapy in southern Africa (Zachariah et al. 2006 for rural southern Malawi). Importantly, Tanzarn suggests that, for disabled people, transport fares may
be set even higher than for others: she notes while transport cost obviously varies according to means of travel, location, condition of the road and season, for boda boda [motorcycle hire services] in rural Uganda, PWDs, particularly those using wheel chairs, are charged a substantially higher rate per kilometre, thus restricting their ability to work: physical handicap thus translates into economic handicap.

Given concerns both about transport cost and wider issues of distance to health facilities and rural access, the intervention in maternal emergency transport reported by Green et al. in northern Nigeria (this collection) has particular significance. This intervention, which is already helping to save the lives of rural women (and, remarkably, at modest cost), is based on a partnership between the Nigerian Road Transport Workers’ Union, the state and local governments and local communities. In this region many women in the past stayed away from health centres in the case of maternal complications in part because of transport unavailability or high transport fares. Training is now provided to commercial taxi drivers who volunteer their services to women facing a maternal emergency in their village in return only for spiritual reward, community recognition, and some possible benefit at the motor-park (in terms of joining the front of the queue of drivers awaiting work). The transport scheme, which is embedded in a broad, multi-component ‘increasing access’ strategy, has to date achieved remarkable success in the villages where it has been implemented: as Green et al, report, there has been impact not only on the so-called ‘second delay’ but also to some extent also on the first and third delays (i.e. in the decision to seek care and treatment at the clinic). The prospects for scaling-up the project across Nigeria look positive (though security problems may reduce the scheme’s effectiveness in the northern states) and the potential for application in other countries is likely to excite considerable interest. In its presentation of such a positive example of a planned transport intervention, this paper is likely to have considerable significance for transport specialists.

The fourth paper in this special issue, also based on action research, considers road traffic accidents and associated injury. Road safety is a major problem in most African countries, such that traffic accidents are the third leading cause of death (after malaria and HIV/AIDS) and a major cause of disability. Factors such as poor road conditions, inadequate safe spaces for pedestrians and IMTs, inadequate road safety training, inadequate enforcement of safety measures, old and badly maintained vehicles and transport equipment and excessive passenger and freight overloading, all contribute to this. Africa has the highest fatality rates per capita of any continent and, as the Sub-Saharan Africa Transport Programme’s annual report for 2011 emphasises, this is a poverty issue. Over 65% of victims are ‘vulnerable road users’ – pedestrians, cyclists and users of IMTs and public transport (ibid p. 19). Rates for Kenya at the turn of the 21st century were c. 68 deaths per 1000 registered vehicles, i.e. 30-40 times the accident rate in highly motorized countries (Gwilliam et al. 2010: 221). Clearly then, road safety has to be a growing focus of attention across Africa and the specific problems associated with rural contexts need much more detailed attention. This paper contributes important data on road traffic injury and its effects in a rural context: while there is a growing literature on road safety, detailed field evidence is still remarkably sparse.

To conclude, this special issue presents papers which, while pursuing linked themes, offer a diversity of perspectives on health, disability and rural access issues which are highly relevant to transport policy and practice. In three of the papers (Jinedasa et al.; Orcutt; Tanzarn), new information is presented about current patterns of transport-related deprivation; they underline the vital importance of fully understanding context through gathering detailed baseline data – with full attention to socio-cultural, economic and environmental aspects- prior to making transport interventions. The fourth paper (Green et al.), is particularly encouraging, however, because it demonstrates that where context has been extensively explored and understood, and local actors fully engaged in finding solutions, the potential for ad-
dressing deep-seated problems in novel ways can be remarkable.
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