From Ageing Research to Policy and Practice

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INTRODUCTION

Increasingly, there is recognition of the importance of the use of research to inform policy. Changing or creating policy is not easy; it involves many factors and can be a very complex process. Research is critical to the process as it provides the mechanism to understand the key factors associated with policy and how to influence the policy-making process. The 'research to action' paradigm has become necessary given the demand for an evidence-based approach to planning and decision-making (1–3). The paradigm also includes the collaboration between academic disciplines and sectors responsible for policy.

Policy research has been recognized as being able to provide decision-makers with recommendations and possible actions for solving issues. As such, issues around social policies are where policy research has had the most impact. Several types of research have emerged involving both primary and secondary sources of data.

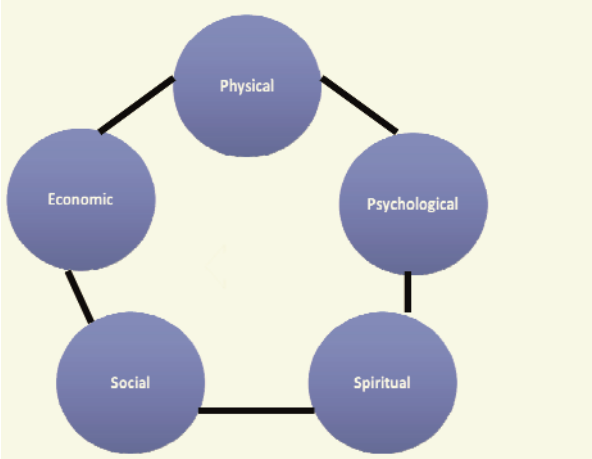
Several skill sets are needed if policy research is to be effective *ie* result in a policy (4). Policy researchers need to be able to transcribe the findings into simple messages, to be able to suggest programmes and interventions and to be effective communicators (5, 6). Ensuring the acceptance and transfer of research into policy is a complex one involving political awareness and close engagement with policy-makers (6, 7).

Keywords: Ageing, policy, research

Ageing is a biological process, which is socially determined and therefore a topic for policy research. Policy has a dual role: it determines how people age and it provides an enabling environment for older persons and, as such, is needed at several levels – the individual, the organizational (*eg* health) and the broader, general country level. Policies and programmes should be based on rights, needs, preferences and capacities of older persons, again demonstrating the need for research to inform policy.

Population ageing is one of the most significant demographic events of the 20th century (8). Given the increased numbers of persons over 60 years who are living longer, by necessity it has to be accompanied by policy intervention. The issues around population ageing in the developing world are different from those in developed countries, requiring a different set of actions. It is occurring when countries are experiencing rapid rates of globalization, industrialization, urbanization, increased technology development and a climate of poor economic growth. In addition, the pattern of diseases has changed, with increased levels of chronic diseases, new infectious diseases (HIV/AIDS) and re-emerging diseases such as tuberculosis. There is also the influence of culture, and so developing countries cannot simply adopt what worked in developed countries.

Population ageing is recognized to impact all aspects of life: economic, financial and social and in turn is impacted by them (8). It affects all ages due to generational relations and is recognized as a life course event (9). Finally, in recent times, it has been recognized as a developmental issue as many of the issues and effects can impact development, for example, the changing age of the workforce and decreased family size. Ageing itself is multi-dimensional (Fig. 1) and defined as having many determinants (Fig. 2). Policy research facilitates the understanding of age-specific key issues especially around determinants and community-specific potential strategies to address them. Involving the communities in the research sensitizes them to possible interventions; community, in this regard, is not restricted to geographical areas.



Source: WHO/PAHO Collaborating Centre on Ageing and Health

Fig. 1: Ageing components.

This paper examines the contribution of The University of the West Indies (UWI) driven research to ageing policy in Jamaica, describing three examples. Two aspects of research

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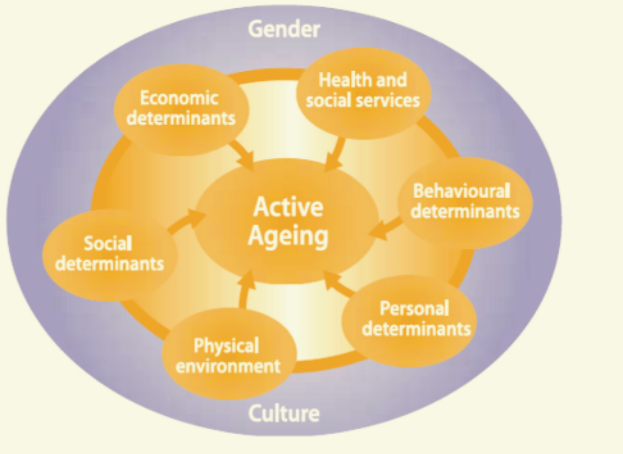

Source: WHO 2001, Active Ageing a Policy Framework

Fig. 2: Determinants of ageing.

have played significant roles: the research findings themselves but equally the exposure that came from presenting at international meetings which, in time, influenced the research.

INTERNATIONAL PARTICIPATION

In 1992, the world through the United Nations (UN) Division on Ageing was focussing on ageing as a developmental issue and recommending the new paradigm of active ageing, defined as "*the process of optimizing opportunities for health, participation and security in order to enhance quality of life as people age*" (9). This concept not only encompasses the multiple dimensions of health – that is physical, mental and social – it also promotes the full participation of elders in societies and therefore social integration and protection of their rights as citizens. The 1989 Jamaica survey of the elderly, one of only a few national surveys in the Caribbean, the other having been done in Barbados by Braithwaite, led to the author participating in a number of international meetings due to the emphasis then on ageing in developing countries and a scarcity of researchers in the area. Presenting at such meetings provided wide exposure to existing ageing plans and policies of other countries and so informed the local developments.

One critical paper developed during several technical group meetings sponsored by the UN Division on Ageing in Vienna was the UN global and regional targets on ageing to which the principal investigator contributed (10). In fact, the organization of the Jamaica policy follows the recommendations of the framework and targets. It was at these UN meetings that it was determined that a second World Assembly on Ageing, this time with a focus on developing countries, was necessary and planned for 2002 in Madrid, the first having been held in Vienna in 1982.

In preparation for the Assembly, 1999 was declared the International Year of Older Persons. The World Health Organization (WHO) in Geneva, like the UN, was also focussing on ageing, specifically the active ageing framework through a series of technical meetings with ageing in the developing countries being the emphasis and involving the same set of persons from Latin America and the Caribbean (LAC). The University of the West Indies participated in the meetings and follow-up regional activities because of its involvement in research.

These meetings led to the development on the UWI Mona Campus of the predecessor to the Mona Centre on Ageing and Health (MAWC), the WHO Collaborating Centre on Ageing and Health, within the Department of Community Health and Psychiatry (then Social and Preventative Medicine).

NATIONAL POLICY

Jamaica, recognized as having an ageing population, does have a national policy on/for seniors (11). The research supporting the development of the policy was a National Survey of Older Persons 1989–92, done by the author and a UWI team which included Ms Sharon White – managing the fieldwork and Dr Chloe Morris doing the policy-related initiatives. The study was funded by the IDRC (12). The survey of a nationally representative sample of 1700, the over sixty population at the time being two million, looked at the health and social status of older persons. The overall findings suggested that older persons were physically and mentally well, a finding that challenged and in fact contradicted the traditional view of older persons as being frail and dependent. Prior to the survey, the governmental services and programmes had focussed on providing a safety net for poor older persons. A major policy shift was indicated as being necessary.

At the local level, that is the Ministry of Social Security, the survey findings, particularly with regard to health and social status, were being seriously discussed. With the UN targets in mind, an awareness of the international conventions signed and the government's capacity, policy initiatives were identified and organized in a framework for further discussion. The principal investigator (D Eldemire-Shearer) was also involved in the administration of the National Council of Senior Citizens, thereby linking academia and the practitioners and fulfilling one of the three criteria identified as necessary for implementing policy research. This link would be instrumental in the writing and promulgation of the National Policy.

A critical factor was the involvement of the Planning Institute of Jamaica (PIOJ) to which the national findings were made available. The PIOJ commissioned two additional research projects which provided additional information. The Survey of Living Conditions in 1995 included a special module on older persons to look particularly at the issue of poverty in such persons (13). They also commissioned an analysis of the status of older persons in Jamaica (14), which went beyond the survey, looking at

employment rates, health status and other social indicators using secondary sources of data including the census, the Labour Force Survey, Registrar General Department (RGD) data sets on mortality and morbidity, Ministry of Health annual reports and other policy documents.

Apart from the above demonstrating the recognition of the importance of evidence-based driven policy, it also demonstrates how research findings can stimulate action on behalf of an agency responsible for planning.

The relationship of sharing documents and information, in this instance between UWI and the Government agencies, still continues especially with the Statistical Institute of Jamaica (STATIN) and has proved beneficial to students in the public health programme.

With the findings of the three research projects identifying the needs of older persons, the next step was to identify the policy solutions relevant and acceptable to Jamaica. Attendance at the international meetings provided policy ideas and best practices to be adapted and included.

At the centre of the policy developed was the recognition of the importance of the international principles for older persons enunciated during the preparatory meetings for the International Year of Older Persons: independence, care, participation, self-fulfilment and dignity.

The opening statement and goal draws on the survey findings of Jamaica having a relatively well older population, 78% physically and mentally well, as it speaks to "*a growing healthier and more active population*" (11).

The first aim of the policy, in recognition of the growth in numbers of the population now clearly documented – 158 000 in 1970 to 239 700 in 1990, and particularly of the over 75 years increasing from 21.6% to 39.4%, was to describe actions to improve the administrative infrastructure of programmes for older person. It embodied the developmental approach, stating "*the need to create the conditions and possibilities for the full participation of seniors for as long as possible*" as well as recognizing the importance of safety nets "*while ensuring systems of care and protection where necessary*" (11). The overall goal of the policy draws on the survey findings of increased chronic diseases and changing social patterns when highlighting the need for health and social services.

In the health section, the major health issues are listed as chronic diseases, increase in the cost of care especially medications and access issues, particularly transportation. The objectives of this section of the policy build on the active and healthy ageing tenets, stressing the importance of "*maintaining function and delaying disability and impairment*" (11). The strategies then provide ways to achieve these objectives.

In the social welfare section, as was noted in the survey, the majority of older persons were without formal support but were receiving family support. The gender differences, men requiring physical assistance while females require financial assistance as they have caregiving networks, were the focus. The groups identified as needing specific attention are the frail and mentally incompetent (12). The policy has a section on family targets which draws on the findings that the majority were in family units; only 10% were living alone and less than 2% were in residential care. Included in this section is the importance of the intergenerational approach and the life course approach.

There is also a section on education and media which was developed from the UN and WHO approach that "*ageing is a lifelong process and preparation is essential…. There is a need to educate the entire society*". The section embraces the concept of lifelong learning.

For income security, the survey informed that the main economic problems revolved around inadequacy or lack of financial security aggravated by the structural adjustment programmes of the time (1985–90), inflation and inadequacy of pensions. The continued participation in self-employment and productive activities was also noted and built on. The objective of the policy was the "support of reasonable and sufficient income". The strategies included provision of pension and support of all income generation activities.

The final example of the link between policy and research is in the section on housing and living environment. The survey identified 78% as owning the house they lived in but having difficulty with upkeep and repairs. The policy included actions in these areas including repair and maintenance support, which are very specific to the age group as the overall national policy on housing is to provide additional "housing solution", not repairs.

The academic influence is also seen as the final area as the policy speaks to the need for research, stating policy needs to be informed by scientific 'data'. As this paper is written, the research team is in the field doing the second National Survey, funded by the National Health Fund (NHF) and Culture, Health, Arts, Sports and Entertainment (CHASE) Fund, having been asked by the Government to review the National Policy (15 years old) and make recommendations for change.

IMPACT ON HEALTH – POLICY AND PRACTICE

The relationship with WHO was resulting in age-specific health research in Jamaica. In the early years, the Mona Ageing research group did not have much influence on the development of health policy except for the introduction of the Jamaica Drugs for the Elderly Programme (JADEP), which did draw on the chronic disease profile of older persons to identify conditions to be included and the more common medications. Providing care for older persons was seen as the concern of the Social Security Ministry. Research changed that perspective.

Between 1995 and 1998, WHO funded two small multi-country studies, Dementia and Successful Ageing, specifically in developing countries, in which the UWI team participated. The outcome from these projects convinced WHO that UWI, Mona, had adequate research capacity and

the Department of Social and Preventative Medicine was designated a WHO/PAHO Collaborating Centre on Health and Ageing (1997). It was at this time that WHO was developing the active ageing framework with a specific emphasis on ageing in developing countries and identified the need for research findings to inform the framework.

As populations age, the question has been how to increase the quality and years of healthy life with the available resources. As before, the lessons of the developed world were not adequate models for countries such as Jamaica. Increasingly, the critical role of the behavioural and social determinants in health was recognized (9). In general, research prior to the WHO initiative focussed on aspects of mortality and morbidity *ie* illness and not wellness. The paradigm shift to healthy ageing dictated that a new wellness research focus was needed. For instance, the factors related to functional decline and ill health are documented but what promotes positive health and what influences choices were seen as needed. This approach was endorsed during the second World Assembly on Ageing and WHO was mandated to provide leadership. This they did through a multi-country project – the integrated healthcare systems response to rapid populations ageing in developing countries (INTRA) – which specially included an element to effect change. Translation of knowledge *ie* research to practice is a focus of WHO (15, 16). This is based on the assumption that "health system policy-makers and decision-makers do not always have the skills, tools and capacity to find and use available evidence". The integrated healthcare systems response to rapid populations ageing in developing countries, funded by the Netherlands, was to examine the health system's role and response to ageing with a particular focus on primary healthcare (PHC), which was again identified as an important first point of care, this time with the focus being on older persons fifty years and over.

The three objectives were:

- The development of a country specific knowledge base to guide future actions and policies towards integrated healthcare
- The building of interdisciplinary teams
- Using the evidence to develop a comprehensive healthcare strategy that would further health promotion and prevention at the PHC level

The main outcomes:

1. Country profile on ageing from existing national data sources
2. Health system reports; an overview of PHC and its role *ie* the economic, social and political context of the course
3. Survey data involving healthcare providers and users (50+) focussing on four themes
   - access and transportation
   - risk factor identification and intervention
   - utilization of healthcare services
   - training and perception of healthcare providers

The Study

The multi-country study was designed at a series of meetings with input from the participating developing countries: Jamaica, Singapore and Botswana. The participation of academics and the Ministry of Health together from the start contributed significantly to the study's ability to influence policy as the Director of Family Health, under whose portfolio the Care of Older Persons falls, was an integral part of the study, including attending all international meetings, especially the planning meetings.

The study examined if and how the services of the primary healthcare system, including preventive, were meeting the needs of the increasing number of older persons, and the factors both positive and negative impacting on care. In the initial phase, each country did a situational analysis of the health status of its over 50 population using record review (17). Jamaica was able to provide some trend analysis as this was the third review (1992 and 1995).

The first phase of the study, INTRA I, was carried out in St Catherine, Jamaica, at the Types 3 and 4 health centres on days when curative services were held over a four-week period. Four teams of two interviewers then rotated through the health centres resulting in 748 interviews. The 485 persons reporting hypertension were given an additional questionnaire to identify the risk factors and details of the disease. Clinic records were perused to provide additional information on the 748 clients and to verify findings.

Eighty-six members of staff were interviewed. Ten focus groups were carried out, eight with older persons picked from the community and not restricted to clinic attendees and two with health centre staff. Six in-depth interviews with healthcare professionals, three in the Ministry of Health and three at the parish level, were done (18).

FINDINGS

The survey identified factors associated with attendance with 91.85% reporting no difficulties. The time to get to the health centre varied from 5–90 minutes and most (42%) used public transport, although 28.2% walked; 16.5% needed to be accompanied, more males than females and this increased with age. Of the 8.2% reporting difficulties, fees – now abolished – was the major barrier. The majority (62.6%) visited the health centres at least once every three months and the commonest answer was to check on blood pressure or diabetes. Only 10% said because they felt ill.

A major issue from the staff was overcrowding at clinics and inadequate time to spend with attendees. Clinics were observed as being 'very full' and sometimes patients had to wait for the doctor from another health centre. Older men were identified as a special interest group as few were noted to be using the health centre (23% of those surveyed – ratio 1:3).

The main chronic diseases were hypertension, diabetes mellitus and arthritis as was found in the 1989 survey. The clinic population had high rates of co-morbidity. Care

focussed on addressing known illnesses. There was little if any screening for the geriatric specific conditions. Illnesses are known to affect the quality of life and functional status of older persons. Patients complained that when attending for blood pressure/diabetes check other complaints were not dealt with due to time constraints and they were told to return at a later date.

Clinical Practice

Of the clinic attendees, 87.4% had their blood pressure tested; 73.1% were advised to have sugar tested and 23.65% were advised to test their cholesterol.

Clinical practice was identified as good except with regard to cholesterol testing which is of concern given the high level of hypertension and cardiac disease in the study population. Staff reported that they did not recommend cholesterol testing as it was only done privately and assumed to be too expensive. A fact the older persons disagreed with, saying, if recommended, they would "*find the money*".

Prevention Practice

This was inadequate. Questions were asked about whether or not the patients were asked about diet, physical activity, smoking and alcohol consumption and whether or not they were given advice about any of them. Fifty-two point six per cent were asked about diet, 56.5% were given advice; 37.9% were advised re: weight; 24.5% were asked about physical activity, 15.0% were given advice; 9.6% were asked about alcohol, 9.8% were given advice; 49.6% said their doctors asked/gave advice; 17.2% said never; 0% asked about their last tetanus toxoid injection; 0% was ever offered a flu shot.

Staff in the focus group said they did not recommend exercise as most older persons were too frail.

Medications

Medications were of particular interest because of the JADEP programme; 94.6% had been prescribed medication and they all said they took the medicines as prescribed when they had them. They admitted that if the medications were not available in the public system or on JADEP, they sometimes did not.

The number of medicines ranged from 1–8 with 81.5% reporting between one and three; 11.8% did not reply. There were slightly more males (27.2%) than females (23.6%) taking only one medication; more males (23.8%) than females (15.2%) were taking three. More males (83.7%) than females (74.5%) took medications as directed. Cost was the main factor reported by females and forgetting was the factor reported by the males for not taking medication.

In summary, the survey identified the health status of those attending the clinic, good levels of clinical practice, high levels of satisfaction with service provided but low levels of prevention practised.

Training and Education

Staff reported varying degrees of education and training on specific ageing related topics. One hundred per cent of doctors and nurses reported knowing of norms and guidelines for management of hypertension but only 68.6% reported knowing of guidelines specific for seniors.

In general, the need for specific training on aspects of geriatric medicine was identified. As a result, several workshops on the topic have been held. Sharing the findings of the survey with health centre staff did trigger a positive response.

The findings of INTRA I indicated the need to explore the relationship between the provision of the integrated health services and the health and well-being of older persons, leading to phases II and III which merged with the second multi-country study.

Age-friendly Guidelines

At the time of planning INTRA II, Jamaica was involved in a second multi-country study to examine the age-friendly characteristics of primary healthcare. Because of limited finances, a qualitative study design was used. The study aimed to:

- examine knowledge, attitude and barriers to community-based care, and
- make suggestions for rendering health services more age friendly

One set of six focus groups divided by age, gender and socio-economic status was done and participants were users and non-users of primary healthcare. A second set of focus groups was done involving providers. The presence in the team of a focus group expert, Dr Nevins, facilitated the activity.

The results of this study were available during the discussions of the quantitative study and proved useful as they suggested reasons for the quantitative findings. It was decided that the focus group approach would be a useful one to use in INTRA II which intended to probe the reasons that influence choice of care, therefore for Jamaica, the studies were merged.

Two sets of focus groups were done and the findings were used to develop a set of age-friendly guidelines for PHC (19) focussing on four areas of need identified by the research. Following a series of international meetings, pre-tests of the instruments and finalizing of the toolkit, it was time to pilot the guidelines. Jamaica and Singapore were chosen because they had the infrastructure and capacity to pilot the guidelines at health centres. The involvement of the Ministry of Health at all stages paved the way for this. The end result has been a clinical toolkit with an emphasis on prevention by screening for geriatric 'giants' to be included while providing the traditional chronic disease care which had been piloted in a Government health centre and is locally appropriate (20). Staff had been exposed to training in the

care of older persons. The research, in addition to providing information, sensitized and educated health providers and had the approval of the ministry. The toolkit is now included in the training of family medicine residents.

The clinical guidelines recognize that healthcare for persons should include screening for problems specific to the age group and which reduce the ability to function – memory loss, depression, falls/immobility, confusion and incontinence – alongside the regular care of chronic disease prevention and management. Not all of the barriers to implementation have been overcome as time constraints and large numbers in clinics still exist.

The guidelines have been introduced in Trinidad and Tobago by Dr Misir, working with the Jamaica team. Bahamas, Grenada and St Lucia have had meetings to discuss the introduction and Barbados, through the training of two geriatric clinical nurses, is using them in the geriatric homes.

Disaster Prevention and Management

The third example of the relationship between research and policy is in the area of disaster prevention and management for older persons who are now included in those listed as vulnerable and for targeted intervention. Over the past 10 years, the increase in the older population has focussed attention on another area of concern for older persons *ie* disasters. They have been identified as being vulnerable and having specific needs (21–23).

In 2005, WHO had a case study project in 10 countries to determine what older persons, their families and interested organizations could do to reduce the impact of disaster. The project partners were Public Health Agency of Canada and Help the Aged UK.

The case studies were based on the hypotheses that older persons were overlooked in disasters and the aim was:

To highlight factors affecting older people in emergencies especially health related
Propose a strategy to cause awareness
Recommend policies and practices

The study was informed by other studies which had identified that the status of older persons in emergencies depended on many factors including the risk of economic and social marginalization, protection from abuse and exploitation, social welfare and intergenerational support. It also assumed that an important consideration was how to integrate services for older persons into mainstream services and ensure equity of service provision across all sectors and ages. The case studies were reviewed by an expert group in 2007 and discussed at two meetings in Canada resulting in the WHO publication 'Older Persons in Disaster' (24).

The Jamaican Study

The Mona Ageing and Wellness Team, led by the author, had been involved in disaster relief over the years and therefore were well placed to do the Jamaican case study. Jamaica had also recently experienced a series of hurricanes and so experiences and information were current (25). The main findings included:

Older persons had problems evacuating
Problems with pre-disaster activities due mainly to frailty
Shelters were not user friendly for older persons
Post-disaster relief did not get to older persons

The local initiatives led to a regional initiative and a publication on guidelines for older persons in disasters. This was published by PAHO and is available online (26). The Mona Ageing and Wellness Centre team, including the author, was contracted to do the research using action research methodology. The objective of the research was to identify the problems faced by older persons, their strengths and contributions in such situations.

Action research was identified as the appropriate method as it would provide information to help understand the complex problems experienced by older persons since it involved discussions with older persons, their family and organizations providing services. The nature of focus group discussions allowed for expression of their thoughts, experiences, fears, ideas, opinions and feelings about disaster management in their communities.

Focus groups were conducted with older persons of both genders, all socio-economic groups and urban and rural areas in Jamaica and Grenada.

Key informant interviews using semi-structured interviews were conducted by telephone, each lasting approximately one hour. The style was open-ended and conversational and participants were allowed to raise additional areas.

Interviews were done with national disaster coordinators, health disaster coordinators, residential home administrators both private and public, and non-governmental organizations (NGOs) working with/for older persons in the British Virgin Islands, Belize, Trinidad and Tobago, Jamaica, Grenada and Suriname.

Data analysis was done separately by country using conventional content analysis method. The main subthemes and a total of four main themes were identified.

There was also an extensive document review. The disaster preparedness plan for each country was reviewed. The region had experienced several hurricanes recently, as well as volcanic activity in Montserrat, an earthquake in Haiti and floods in Suriname, therefore, a wide range of issues were examined. The reports of these events were reviewed for information on older persons; equally important was the absence of such information.

The research found that while there was increased recognition of the needs of older persons, more needed to be done to meet these needs. The unique capacities of older persons especially their resilience and ability to survive was noteworthy and considered to be a lesson for others highlighting the need for intergenerational sharing. Older persons had the capacity and experience to make a contribution to

preparing for and responding to disasters but often needed physical assistance. Older persons with disabilities had particular needs both in preparing for and recovering after a disaster but there were few, if any, programmes in place for them. Mental disability was a particular need and as it increased with age, was often accompanied by increased frailty.

Older persons were noted to be a very diverse group with varying levels of vulnerability. The degree and severity of impact varied according to the characteristics of the persons and the type and severity of the disaster.

It was noted that age itself did not increase vulnerability but rather the problems of increased age *ie* chronic diseases, deteriorating physical and mental ability, decreased strength, low tolerance for physical activity, functional limitations and decreased sensory function.

Finally, it was noted that planners and policy-makers needed to be made aware of these factors as in most cases it was ignorance that caused the lack of provision of services.

Communication was a particular concern as older persons, who have different capacities from younger persons, often reported not being targeted with messages. This differed from the views of planners who thought they had included older persons in the general message.

Using the above findings, practical recommendations for action at various operational levels have been made. Information guidelines for older persons were drafted. The draft was discussed, amended and validated during a consultation with representatives from Caribbean and national institutions dealing with older persons and/or disaster management resulting in the final product now being circulated.

Research can only make a contribution when the findings are used for the benefit of the study population. The three examples described suggest that the Mona Ageing and Wellness Team are aware of this and make the necessary effort to ensure that research findings do lead to policy and programmes.

REFERENCES

1. O' Brien R. An overview of the methodological approach of action research. In: Richardson R, ed. Theory and Practice of Action Research. João Pessoa, Brazil: Universidade Federal da Paraiba; 2001. Available from: www.web.ca/robrien/papers/arfinal.html
2. Dukeshire S, Thurlow J. Understanding the link between research and policy. Rural Communities Impacting Policy Project; 2002. Available from: www.ruralnovascotia.ca/documents/policy/research%20and%20policy.pdf
3. Gonzales-Block M. Health policy and research agendas in developing countries. Health Research Policy and Systems 2004; **2:** 6. doi:10.1186/1478-4505-2-6. Available from: http://www.health-policy-systems.com/content/2/1/6
4. Young J. Impact of research on policy and practice. London: Overseas Development Institute (ODI); 2008. Available from: http://www.odi.org.uk/resources/docs/3459.pdf
5. World Health Organization. World Health Report 2006 – working together for health. Geneva: WHO; 2006. Available from: www.who.int/whr/2006/en/
6. Hennick M, Stephenson R. Using research to inform health policy barriers and strategies in developing countries. Journal of Health Communication 2005; **10:** 136–80.
7. Crew E, Young J. Bridging research and policy: context, evidence and link. Working paper 173. London: Overseas Development Institute (ODI); 2002. Available from: http://www.odi.org.uk/resources/docs/184.pdf
8. World Population Ageing 2009. Publication ST/ESA/SER.A/295. Department of Economic and Social Affairs, Population Division. New York: United Nations; 2010.
9. Active Ageing: a policy framework. WHO/NMH/NPH/02.8. Geneva: World Health Organization; 2002: 12, 20–2, 33–5.
10. United Nations. Report of the Second World Assembly on Ageing; 2002 Apr 8–12; Madrid. New York: United Nations; 2002. [Accessed December 1, 2009]. Available from: www.un.org/esa/socdev/ageing/madrid_intlplanaction.html
11. National Policy for Senior Citizens. Kingston, Jamaica: Ministry of Labour and Social Security; 1997.
12. Eldemire-Shearer D. An epidemiological profile of elderly in Jamaica. PhD Thesis [unpublished]. 1993.
13. Planning Institute of Jamaica. Jamaica survey of living conditions – special module on the elderly 2005. Kingston: Planning Institute of Jamaica; 2007.
14. Eldemire-Shearer D. A situational analysis of the Jamaican elderly, 1992. Kingston: Planning Institute of Jamaica; 1995.
15. World Health Organization. Knowledge translation on ageing and health: a framework for policy development 2012. Geneva: World Health Organization; 2012. Available from: http://whothailand.healthrepository.org/handle/123456789/1422
16. Koon AD, Nambiar D, Rao KD. Embedding of research into decision-making processes. Alliance for Health Policy and Systems Research/WHO; 2012. Available from: http://www.who.int/alliance-hpsr/alliancehpsr_backgroundpaperembeddingresearch.pdf
17. Eldemire-Shearer D, Team Jamaica. Jamaica INTRA II findings. Geneva: World Health Organization; 2004. Available from: http://www.who.int/ageing/projects/intra/phase_two/alc_intra2_finalreport_jamaica.pdf
18. Eldemire-Shearer D, Holder-Nevins D, Morris C, James K. Prevention for better health among older persons: are primary healthcare clinics in Jamaica meeting the challenge? West Indian Med J 2009; **58:** 319–25.
19. World Health Organization. Age-friendly primary health care centres toolkit. Geneva: World Health Organization; 2008. Available from: http://www.who.int/ageing/publications/Age-Friendly-PHC-Centre-toolkitDec08.pdf
20. Age friendly primary health care clinical toolkit. Kingston: Mona Ageing and Wellness Centre, the University of the West Indies; 2011. Available from: http://myspot.mona.uwi.edu/commhealth/phc-tool-kit-booklet
21. Pan American Health Organization. Humanitarian assistance in disaster situations: a guide for effective aid. Washington, DC: PAHO; 1999. Available from: http://www.paho.org/english/ped/pedhumen.pdf
22. HelpAge International. Older person in disasters and humanitarian crisis: guidelines for best practice. London: HelpAge International; 2000. [Accessed October 20, 2009]. Available from: http://www.reliefweb.int/library/documents/HelpAge_olderpeople.pdf
23. International Federation of Red Cross and Red Crescent Societies. World Disasters Report 2007. Focus on discrimination. Geneva: International Federation of Red Cross and Red Crescent Societies; 2007: 62–111.
24. World Health Organization. Older persons in emergencies: an active ageing perspective. Geneva: World Health Organization; 2008. [Accessed December 1, 2009]. Available from: http://www.who.int/ageing/publications/EmergenciesEnglish13August.pdf
25. Pan American Health Organization. Guidelines for mainstreaming the needs of older persons in disaster situations in the Caribbean. Washington, DC: Pan American Health Organization; 2012. Available from: http://new.paho.org/disasters/index.php?option=com_content&task=view&id=1657&Itemid=1