

MANAGING TENSIONS IN STATUTORY PROFESSIONAL PRACTICE: LIVING AND WORKING IN RURAL AND REMOTE COMMUNITIES

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ABSTRACT

Delivering essential health, education and human services in rural and remote communities remains a critical problem for Australia. When professionals have mandatory responsibilities (e.g. in child protection, law enforcement, education or mental health), tensions can arise between workers and the communities in which they live. This paper reports on part of an Australian Research Council Discovery project which is exploring the management of tensions in work-life balances for professionals in rural and remote communities, as well as investigating the views of community members impacted by the work. In this paper we present findings from the state wide survey of professionals (N ≈ 900) who lived and worked in small communities and who had statutory responsibilities in their role. These data provide valuable insights into practitioners' views about their roles, their preparation for rural practice during education and training, major tensions in juggling allegiance to work and community and the strategies they employ to address these. It is hoped that the study in the long term will offer solutions to the complex medical, legal and social issues that arise for different professional groups in the discharge of their duties. This 3-year project uses both qualitative and quantitative methods to map the terrain of rural and remote statutory work, to explore the nature of the relationships between professionals and communities and examine how professionals manage ethical and allegiance conflicts which arise.

LIVING AND WORKING IN RURAL COMMUNITIES

Living and working in small communities poses challenges for many professional in the execution of their daily work-tasks. The juggling of multiple roles which straddle both their professional and personal worlds becomes an ongoing negotiated space of conflicting responsibilities and allegiances with increased potential for ethical dilemmas (Hargrove, 1986; Fertman, Dotson, Mazzocco & Reitz, 2005; McAuliffe, 2005a). When the nature of the work includes a statutory requirement, which carries some legal responsibilities such as mandatory reporting, policing or the regulation of mental health patients, the frequency and intensity of these dilemmas are likely to be

increased. Highly publicised events such as the intervention in the Northern Territory, the prosecution of a police officer working in an Indigenous community and the standing down of child protection workers in a remote Queensland community or the shooting of a person with mental illness as an act of police containment all highlight the more severe consequences of these tensions and statutory work more broadly. Little is known about how communities perceive and relate to these professionals or about how the professionals work through these dilemmas while maintaining their position as community members. Such dilemmas are likely to arise, we argue, in the work of social workers, health professionals, teachers, police officers, doctors, community corrections workers and other human service practitioners.

Several key questions arise, then, when considering these events and the context of rural and remote communities: What is the nature of the relationships between professionals and their communities? How are these issues negotiated in smaller communities? And more broadly, how can health and human services workers be better equipped to address multiple relationships and thus improve health, law and order, welfare and educational outcomes for rural citizens?

SOME RECENT STUDIES ON LIVING AND WORKING IN RURAL COMMUNITIES

Our analysis of literature shows that there is an identifiable gap in our knowledge of the managed tensions experienced in the day to day routines of professionals with statutory responsibilities in rural communities. Indeed much of the research writing deals with issues relating directly to particular professions, rather than exploring the possible factors for comparison across professions.

In the field of Education there are a number of identifiable themes in the literature with respect to rural and remote education. Many studies have investigated issues of transitions (MacDonald, 2008; Collie, Willis, Paine & Windsor, 2007), teacher preparation (Lock, Reid, Green, Hastings, Cooper & White, 2009), technologies to overcome distance (Crump, Twyford, Littler, 2008; Devlin, Feraud, & Anderson, 2008) and place pedagogies (McConaghy, 2006; McConaghy, Graham, Patterson, 2006).

Similarly there are a number of 'threads' that are common across discipline areas. In social work recruiting and retaining professionals in rural and remote communities is a major problem well documented in social work (Cheers, 1992; Chenoweth, 2004; Lonne & Cheers, 1999; McAuliffe, Chenoweth & Stehlik, 2007), allied health (Gibbs & Keating, 1999; Ricketts, 2005), medicine (Veitch, Harte, Hays, Pashen & Clark, 1999; Jones, Humphreys & Adena, 2004) and education (Appleton, 1998; Yarrow, Herschell & Millwater, 1999; Herrington & Herrington, 2001). In professions such as policing or teaching, which typically mandate posting to rural and remote communities within the terms of employment, recruitment is less problematic for professionals who often serve shorter employment terms (Montgomery, 2003).

However, difficulties often arise through lack of 'outsider' acceptance in rural cultures (Weisheit, Wells & Falcone, 1995). This can make the performance of work roles more difficult (Payne, Berg & Sun, 2005). At the same time, communities are disadvantaged by such short-term postings because insufficient time is committed to building mutual trust (O'Connor, 2007).

It is widely accepted that statutory work and work with mandated clients poses significant practice and ethical challenges in all geographic locations (Burman, 2004; Trotter, 2006). Professionals in statutory contexts are confronted with the dual dilemmas of maintaining "social control" or promoting the general welfare of society and "helping" or fostering improved functions and self determination (Burman, 2004). It is argued that practice will be much more effective if these difficulties are able to be acknowledged and understood both by workers and their clients (Trotter, 2006). The degree to which these dualities are explicit varies across different professional groups. For example, in policing or correctional work, the social control agenda is clearly the major priority for intervention. We suggest that community members too have clearer expectations and awareness of these roles. In other fields such as child protection, teaching or mental health, the mandated role is less well known in the general community and thus the potential dilemmas are more covert. When such roles are performed in smaller communities these issues become intensified. In fields such as education, boundaries are often blurred in parent-teacher relationships. A significant factor in the relationships in school communities is the increased overlap and nature of dense complex social networks. Often relationships between schools and communities go beyond any sense of the client and service-provider "divide" in rural contexts (Johns, Kilpatrick, Falk & Mulford, 2000; Wilkie & Newell, 2000). Further, as Sutcliffe (2001) notes "the school, particularly in rural communities, is often the strongest community institution. It is a gathering point, a centre symbolising community and a resource that can unite the community". This prominence of the school - and its staff - in the community can create tensions as teachers negotiate a delicate balance between their professional and personal life.

However, what the work cited above does not do, and where the literature in general is short on explanation, is in the production of research that looks through an interprofessional lens as it examines multiple professions with statutory responsibilities. In particular very few studies have examined the nature of statutory work in rural communities. Studies of child protection work in rural settings tend to focus on the attitudes of rural residents to child abuse (Calvert & Munsie-Benson, 1999) or the patterns of notification of child abuse in rural towns (Craft & Staudt, 1991; Manning & Cheers, 1995). A recent Qld state wide study (O'Connor & Cannon, 2007) of carers' perceptions of support for family members with mental illness identified conflicts between some professionals' discharging their statutory responsibilities and the compromised care of service consumers. However, these studies do not provide findings about the relationship between statutory workers and communities or how it plays out for professionals in the discharge of their

duties or for communities in understanding and supporting a presence expected to support its integrity.

The ethical dilemmas of dual relationships in rural practice have been documented in psychology (Campbell & Gordon, 2003; Hargrove, 1986) and social work (Chenoweth & Stehlik, 2001; Chenoweth, 2004; Martinez-Brawley, 2000; McAuliffe, 2005b). Evidence from an early Queensland study on disability services (O'Connor, Bramley & Gunn, 1983) revealed a willingness of diverse professionals serving communities distant from their employing authority, to make local adjustments rather than slavishly follow central bureaucratic requests. These accounts not only outline the inevitability of dual relationships in rural and remote settings, but also acknowledge the strain on professionals trying to work within organisational parameters, legislative frameworks and ethical codes of conduct. There is little published beyond problem identification with few supported strategies for addressing concerns.

In other contexts where multiple relationships generate conflicts of allegiances, for example in the work of military psychologists stationed on aircraft carriers, Johnson, Ralph and Johnson (2005) argued that the primary allegiance is to the mandate authority. Using the concept of embedded psychology, they suggested that the psychologist has profound power over the client's life and encounters multiple-role strain through boundary crossing. Cheers (1998) also used this notion of embeddedness to describe the context of rural social work practice. This refers to the way in which rural professionals are entwined in community life and thereby identify with and have allegiance to their community while executing organisational and legal responsibilities as agents of the state.

Our brief review of some of the relevant recent research has led us to argue that there is little evidence that research focussing on professionals with statutory responsibilities living and working in a rural community is a concept that has been adequately described. We suggest that this kind of knowledge is a critical precursor to reconceptualising approaches to improving health, welfare and educational outcomes for rural communities.

MANAGING TENSIONS IN PROFESSIONAL STATUTORY PRACTICE: THE PROJECT DESIGN

The ARC Discovery project described in this section builds upon previous work of recruitment and retention issues for child protection practitioners in rural Queensland the findings from which highlighted the difficulties for many child protection practitioners in carrying out statutory responsibilities such as removing a child from a family in small communities where they also lived. These activities and the reaction from community members were reported as highly stressful and fear-provoking by many practitioners. Juggling the demands of statutory work, the needs of clients and becoming accepted members of the local community emerged as a crucial issue influencing their decisions to remain in or leave their position.

The “Managing Tensions in Professional Statutory Practice” project aims to develop knowledge about how communities and those professionals providing key health, welfare and educational services can work more effectively for more positive outcomes for individuals, families and whole communities and how such services change when impacted by local issues and place imperatives. The research involves interdisciplinary issues across different professions and explores and examines the ethical issues confronting them and to identify possible factors for comparison across these professions. Specifically the research aims to address the following research questions:

1. What statutory responsibilities and requirements exist for professionals in rural and remote communities in Qld?
2. What are the experiences of professionals with statutory responsibilities who live and work in rural communities?
3. What are the experiences and views of community members about their relationships with these professionals?
4. How do professionals balance the competing demands between the central authority (agency) and local relationships?
5. How do these tensions impact on ethical practice and professional agency? and
6. How can theories of power and governmentality explain these phenomena?

Methodology

This 3-year project uses both qualitative and quantitative methods to map the terrain of rural and remote statutory work, to explore the nature of the relationships between professionals and communities and examine how professionals manage ethical and allegiance conflicts which arise. The key elements of analysis in the study are statutory programs and roles, the professionals performing these roles and the communities in which they live and work. Figure 1 illustrates the site for the study and the corresponding methods used.

Figure 1: Elements of study and corresponding data methods



As a way of defining the elements of this study the following explanations of the concepts have been adopted.

Statutory work: Human service agencies and workers increasingly operate under legislative regimes that require them to do certain things in their work or avoid other activities. A number of professionals have statutory duties and powers, which may be specific (e.g. mandatory reporting) or more general. Much of this work happens within a complex arrangement of interlocking and legislative provisions, regulations and employer procedures – e.g. privacy legislation (Kennedy, 2004). It also highlights the importance of the inter-relationships between central control and working in dynamic rural/remote environments. In this study we are including activities such as policing, mandatory reporting, child protection work, regulation of mental health patients and enforcing community correction orders.

Professionals involved in statutory work: For the purposes of this study across the health, justice, education and human service systems, the following professionals will be included in the study: police officers, corrective services officers, social workers and welfare workers, teachers, mental health professionals, medical practitioners, and allied health professionals. Some of these professionals may encounter statutory responsibilities infrequently (e.g. teachers having to report suspected child abuse) while others deal with statutory work in most of their daily tasks (e.g. police officers).

Rural and remote communities: The study draws on several approaches to determining rural/remoteness. First, communities will be assessed using Accessibility/Remoteness Index of Australia (ARIA) scores. It is anticipated that communities will include Moderately Accessible, Remote and Very Remote communities. Second, degrees of disadvantage will be taken into account using Socio-economic Index for Areas SEIFA, 2001. Qualitative definitions, while recognising that population size and distance are a contributing elements to what constitutes 'rural' focus on the cultural and relational dimensions of places and people (Halsey, 2007). As well we will take into account the different organisational definitions of rural and remote, for example across health, education and policing.

The aim of the online survey was to explore the nature of the relationships between human services professionals with statutory responsibilities and communities, and to examine how professionals manage ethical and allegiance conflicts which arise.

Purposive sampling was used in order to target human services professionals with statutory responsibilities, such as medical practitioners, nurses, allied health professionals, social workers, teachers, and human service workers, currently working or who have previously worked, in rural and remote communities in Queensland. Participants were recruited through advertising the survey through Government agencies, unions, professional associations, and non-government organisations.

The survey was developed using the application Lime Survey. The survey consisted of both close- and open-ended questions, and took participants approximately 30-45 minutes to complete. The survey was developed from the researchers' existing knowledge of those factors likely to influence rural practice and statutory work.

Section one of the survey asked questions around basic demographic data such as age, gender, professional background and position, and family situation. Section two included questions about prior experience of both living and working in rural and/or remote communities, and the nature of statutory responsibilities, other work and roles, perceptions of acceptance or exclusion by rural and remote communities. Section three of the survey was about how professionals manage any tensions experienced, from living and working in rural and/or remote communities. The survey was pilot tested and evaluated by human services professionals with statutory responsibilities currently living and working in rural and remote communities in Queensland. Their feedback was incorporated into the final version of the survey.

PRELIMINARY FINDINGS FROM THE SURVEY OF PROFESSIONALS

With a response rate of n=900 the data generated is rich and varied. Many of the respondents took the opportunity to 'tell their story'. Participants were very motivated to provide highly informative comments in the open-ended items responses. Consistent with the emerging literature in this area, the survey provided a valuable means to capture the thoughts and perspectives of the respondents dispersed over a wide geographical area (Klieve, Beamish, Bryer, Rebollo, Perrett & van den Duyzenberg, 2010).

As noted the respondents came from a range of professional areas such as police, teachers, social workers, medical practitioners, nurses, paramedics and other areas. Of those surveyed 612 currently live within a rural or remote area, with 22% graduated within the last 5 years. The majority of the respondents worked in some capacity within the State Government (69%), around 5% in private practice and 12% in Non-Government Organisations (NGOs).

Major tensions and strategies to deal with them

Are multiple role relationships problematic in the day to day practice experience of professionals working in rural and remote communities? Preliminary data would suggest that the answer is *yes*. Indeed the data suggests that the blurred boundaries and dual roles within the community constitute a considerable contribution to the tensions experienced.

The survey revealed 82% of respondents indicated that they experienced some sort of tension related to living and working in a rural and/or remote community. As indicated earlier professionals in rural and remote areas must juggle multiple roles which straddle both their professional and personal worlds. The statutory nature of their work complicates matters as boundaries become blurred and the execution of their daily work tasks becomes difficult.

Common themes emerged from the preliminary analysis such as tensions juggling relationships (personal and professional); professional boundaries; difficulties associated with the centrality of the organisation in which participants worked and their lack of 'rural' understanding; maintaining confidentiality; and, role specific tensions. Throughout the common themes the notion of managing a professional identity weaved through all of the tensions identified by the respondents.

The following response from a School Principal currently living in a rural or remote community highlights the many difficulties associated with managing personal and professional relationships:

Parent community relations: Living and working in a small remote community with small number of families can at times create tensions. Need to be mindful of local politics, local kinship relationship connections, traditions, customs and cultures of community and respect these.

Staff relationships: living and working with small number of staff creates tensions particularly when performance of staff is being questioned and monitored. Having those difficult conversations re: performance places emotional stress on Principals.

Personal relationships: As there are limited number of opportunities to "release work tensions", partners often have to deal with work stresses at home which can create tensions within a relationship.

Social interactions: Limited social opportunities. Parents also at majority of social events so behaviour and conduct must be exemplary at all times. Hard to 'unwind' and relax at social events due to nature of the position and people socialising with (parents, families, students) (School Principal)

Relatedly, another major source of tension identified was the blurring of professional and personal boundaries. The following quote illustrates how being 'embedded' within a community as a professional and a community member can cause considerable tension and potential conflict:

One of the biggest tensions is the size of the community – you sometimes end up doing investigations on people that you went to school with, or people that you work with (from other organisations), or the solicitor that you are 'battling with' through court is the same person that turns up at the local netball club. We have to be really mindful of conflicts of interest

and our ability to still make good decisions for children and their families and if that is compromised, then that needs to be declared and managed appropriately (Social Worker)

From another perspective, however, a lack of knowledge and familiarity of rural communities associated with working for an organisation where the central office was metro-centric also contributed to a sense of tension. The following quote from a High School Principal highlights the result of a lack of real understanding of rural issues on the ground:

Rarely is it a situation of outright conflict with people however, it can be a common tension to have to tell people that a service or support that they have been receiving is no longer able to be provided as a policy has changed. Being the public mouthpiece for the corporate line often creates significant internal tension as what one is required to say and implement can often be at significant odds with personal values and beliefs and at times is just plain wrong. Being required to implement constantly changing policies and practices with an ever diminishing range of resources is a central element of the role and not being able to achieve to a standard that one believes is needed is a source of tension. A bureaucratic approach to staff selection and management by the organisation creates significant tension as any performance issues require a disproportionate amount of time, energy and never actually achieve a lasting solution unless there is a criminal matter involved (School Principal)

A common feature of all the professions surveyed was the need for confidentiality with respect to sensitive information and circumstances with members of the community. Maintaining this confidentiality proved difficult for many respondents as the following quotes highlight:

People sometimes have an expectation that you will discuss confidential issues with them regarding family or friends – they do not like to be told that information is confidential. There is also a proportion of the community who expect that you will be available to them 24 hours a day even though this is not a job requirement. You are never really “off duty” (School Teacher)

And this,

Being the holder of quite a lot of sensitive and confidential information, tends to embarrass the giver of the information. Social situations can be difficult for the other person and maintenance of professional discretion is paramount to the job (Regional Manager, Human Services)

Within particular professions some very significant role-associated pressures were raised. Preliminary analysis suggests that the more significant the areas of statutory responsibility, the more significant the tensions experienced. The following is an experience of a Police Officer currently serving in a remote community:

To the community I am a police officer and nothing else. Taking action against any person for an offence creates negative reactions in the community against Police. Remote locals feel they should be immune to the law because of remoteness, this increases possible violent behaviour when action is required. General dislike of Police prevents my involvement in activities outside my work. Unable to enjoy a hotel environment dinner or a few drinks due to risk of violence from other patrons (Police Officer)

Further, the following responses from a Mental Health Worker, Childcare Worker and Social Worker consecutively describe similar role-associated tensions and how it is exacerbated due to size of the community:

Given my role is to make decisions about fundamental human rights or the revocation of those rights people often feel aggrieved and then I run into them on the streets (Mental Health Worker)

Parent to staff relations can be strained when parents do not get what they want. Being a small community, people assume that laws and legislations don't count for us. They feel that certain things should be overlooked to suit them. Parents then become hostile towards staff when staff enforce rules and policies within the centre (Childcare Worker)

I experience a high degree of interaction with consumers outside my workplace, e.g. at shops, at church, at sporting events, at community events associated with my friends/family. I think adherence to codes of ethics/statutory roles complicates my private life. E.g. I completed a Child Safety Notification that resulted in a family being assessed. The family were able to identify me as the reporter. I knew that I played in the same touch football competition and would probably see them there. However, I care greatly about my role and would rather do what is right despite the impact that it has on my life – I guess it just means there is a higher cost of doing this in a rural/remote area (Social Worker)

The tensions highlighted here raise particular issues for people working as professionals in rural and remote communities. Issues surrounding the management of professional identity and dual roles, the size of the community and the number of professionals working in a particular area, over familiarity with community members and the metro-centric nature of many organisations contribute to the type and severity of the tensions experienced. How respondents managed the tensions was also explored through the survey. These issues are consistent with the characteristics of rural communities identified by Johnson, Ralf, and Johnson (2005,

p. 74). They suggest that it is these tensions that make multiple relationships more common and difficult to avoid. They include:

- Community members want to know details about others in the community;
- Non-community members can be distrusted and may be viewed with suspicion;
- Multiple levels of relationships are expected and viewed as normal;
- Geographical isolation in these communities results in a limited number of social relationship options;
- There is an increased incidence of personal contact and interaction outside of the professional boundaries;
- The existence of some multiple roles between ‘professionals’ and ‘clients’ is nearly certain.

Participants identified a number of strategies they drew on to manage those tensions. The strategies can be categorised into three broad areas: Avoidance strategies, involvement in Activities, and Work Related strategies. Table 1 highlights the strategies identified.

Table 1: Strategies for dealing with tensions

Avoidance	Activities	Work Related
<ul style="list-style-type: none"> • Don't leave the house on days off • Avoid work social functions out of hours • Work at home on our farm • Holiday outside the community • Maintain very few personal friendships within the community 	<ul style="list-style-type: none"> • Drinking • Joined a shooting club • Informal entertaining • Exercise • Fishing • Martial Arts • Bought a dog • Make new friends • Shop • Online gaming • Be involved in the community 	<ul style="list-style-type: none"> • Use of discretion • Speak to others who have the same role as myself • Speak with Human Services Officer • Avoid certain clients • Cope and put in extra hours • Debriefs • Discuss in Clinical Supervision

The strategies listed in Table 1 range from effective to ineffective coping strategies. Strategies such as “drinking” and “online gaming” for example may mask more serious conditions such as depression. Other strategies, such as “don't leave the house on days off” also sit at odds with potential benefits of “embedded practices”. As Johnson, et al, (2005) suggest, “as a visible member of the community, the professional enjoys a boost in credibility; he or she is a genuine insider and gains considerable currency from abiding by community standards” (p. 76). However, as can be seen in Table 1, many effective strategies were also identified placing the professional in the community as both member and professional.

DISCUSSION AND CONCLUSION

As demonstrated professionals assume multiple and sometimes competing responsibilities as judicial and statutory systems intersect with others such as health, education and human services. There is a proliferation of blurred boundaries. The data presented in the paper suggests that the fusion of professional and personal interactions with member of the community is commonplace and often creates difficulties in balancing relationships, understanding relevant ethical obligations and avoiding potentially harmful relationships. The preliminary analysis shared points to a commonality of issues across professions for professionals living in rural and remote communities in Queensland. One message that emerges from the brief portrayals of professionals' experience is that the context of small rural communities influences what professionals do in the course of their professional practice and the ways in which they deal with the related tensions of that practice. Cultural contexts are very pervasive in determining the types of relationships and networks that are available. As McDowell (1999) puts it "places are made through power relations which construct the rules which define boundaries. These boundaries are both social and spatial - they define who belongs to a place and who may be excluded, as well as the locations or site of experience". These factors can severely impact on a professional's capacity to meet work commitments and function successfully as a community member.

The stories here demonstrate that despite a range of workplaces and practices, a commonality exists. It highlights the value of incorporating knowledge of how "professions" fit in a community, how communities work and how people with a variety of professional backgrounds can work effectively together with community partners.

Our suggestions here help to underscore the importance of the kind of knowledge we are saying is necessary. We have presented an argument in this paper that began with an assumption that there is a discernable interest and focus on issues regarding rural and remote issues. This research predominately focuses on particular professions or disciplines with a definite thematic thread connecting common issues. The result of our thinking is the claim that to better equip professional working in rural and remote communities will only be improved when there is a much more substantial knowledge base and indeed theoretical explanation about the tensions professionals with statutory responsibilities face whilst living and working in rural communities, and the interrelationship between professional practice and common tensions, that presently exists.

REFERENCES

- Appleton, K. (1998). Putting rurality on the agenda: Beginning teachers in rural schools, paper presented at the *Annual Conference of the Australian Association for Research in Education*, 29 Nov-3 Dec Adelaide
- Australian Institute of Health & Welfare (AIHW)(1998) Health in rural and remote Australia AIHW Cat No PHE6 Canberra: AIHW
- Burman, S. (2004). Revisiting the agent of social control rule: Implications for substance abuse treatment, *Journal of Social Work Practice*, 18(2), 197-210
- Calvert, J. & Munsie-Benson, M (1999). Public opinion and knowledge about childhood sexual abuse in a rural community. *Child Abuse and Neglect*, 23(7), 671-684
- Campbell, C. & Gordon, M. (2003). Acknowledging the inevitable: Understanding multiple relationships in rural practice. *Professional Psychology: Research and Practice*, 34(4), 430-434
- Cheers, B. (1992). Rural social work and social welfare in the Australian context. *Australian Social Work*, 45(2), 11-21
- Cheers, B (2998). *Welfare bushed: Social care in rural Australia*. Birmingham: Ashgate
- Chenoweth, L, & Stehlik, D. (1999). Interpreting human service policy in regional and rural Queensland: The practitioners' perspective. *Just Policy*, 15, 21-28
- Chenoweth, L., & Stehlik, D. (2001). Building resilient communities: Social work practice and rural Queensland. *Australian Social Work*, 54(2), 47-54
- Chenoweth, L. (2004). Towards an integrative education for rural practice. *Rural Society*, 14(3), 276-287
- Collie, L., Willis, F., Paine, C., & Windsor, C. (2007). Working together for children: Strengthening transition pathways. *Education in Rural Australia*, 17(2), 79-98
- Craft, J., & Staudt, M. (1991). Reporting and founding of child neglect in urban and rural communities. *Child Welfare*, 70(3), 259-370
- Crumb, S., Twyford, K. Littler, M. (2008). Interactive distance e-Learning for isolated communities: The policy footprint. *Education in Rural Australia*, 18(2), 39-52
- Devlin, B., Feraud, P., Anderson, A. (2008). Interactive distance learning technology and connectedness. *Education in Rural Australia*, 18(2), 53-62
- Eckermann, A,, Dowd, T., Chong, E., Nixon, L., Gray, R., Johnson, S. (2006) *Binang goonj: Bridging cultures in Aboriginal health* (2nd Ed.). Marrickville: Elsevier
- Fertman, C., Dotson, S., Mazzocco, G., & Reitz, M. (2005). Challenges of preparing allied health professionals for interdisciplinary practice in rural areas. *Journal of Allied Health*, 34(3), 163-168
- Foucault, M. (1980). The eye of power. In C. Gordon (Ed). *Power/knowledge: Selected interviews and other writings 1972-1977* (pp. 146-165). New York: Pantheon
- Foucault, M. (1982). Afterword: The subject and power. In H. Dreyfus & P. Rabinow (Eds.). *Michel Foucault: Beyond structuralism and Hermeneutics*. Brighton: Harvester
- Foucault, M. (1988). Technologies of the self. In L.H. Martin, H. Gutman, & P.H. Hutton (Eds.). *Technologies of the self*. Amherst: University of Massachusetts Press

- Gibbs, J.A., & Keating, T.P. (1999). *Recruitment and retention of child protection workers in rural Victoria: Report to the Victorian Department of Human Services*. La Trobe University, Albury/Wodonga Campus
- Hargrove, D. (1986). Ethical issues in rural mental health practice. *Professional Psychology: Research and Practice*, 17(1), 20-23
- Herrington, A., & Herrington, J. (2001). *Web-based strategies for professional induction in rural, regional and remote areas*. Paper presented at conference of the Australian Association for Research in Education, 2-6 December, Melbourne
- Humphreys, J., Jones, M., Jones, J., & Mara, P. (2002). Workforce retention in rural and remote Australia: Determining the factors that influence the length of practice. *Medical Journal of Australia*, 17(6), 472-276
- Johns, S., Kilpatrick, S., Falk, I., & Mulford, B. (2000). School contribution to rural communities: Leadership Issues. CRLRA discussion paper. University of Tasmania: Launceston, Tasmania
- Kennedy, R. (2004). *Integrating human service law and practice*. Melbourne: Oxford University Press
- Kenny, A., & Duckett, S. (2004). A question of place: medical power in rural Australia. *Social Science and Medicine*, 58, 1059-1073
- Kenny, A. (2004). Medical dominance and power: A rural perspective. *Health Sociology Review*, 13(2), 158-165
- Lock, G. Reid, J.A., Green, B., Hastings, W., Cooper, M., White, S. (2009). Researching rural-regional (teacher) education in Australia, *Education in Rural Australia*, 19(2), 31-44
- Lonne, R., & Cheers, B. (1999). Recruitment, relocation and retention of rural social workers. *Rural Social Work*, 5(December), 13-23
- Manning, C., & Cheers, B. (1995). Child abuse notification in a country town. *Child Abuse and Neglect*, 19(4), 287-297
- Martinez-Brawley, E. (2000). *Close to home: Human services in the small community*. Washington DC: NASWQ Press
- MacDonald, A. (2008). Kindergarten transition in a small rural school: From planning to implementation. *Education in Rural Australia*, 18(1), 13-21
- McAuliffe, D. (2005a). Putting ethics on the organisational agenda: The social work ethics audit on trial. *Australian Social Work*, 58(4), 357-369
- McAuliffe, D. (2005b). I'm still standing: Impacts and consequences of ethical dilemmas for social workers in direct practice. *Journal of Social Work, Values and Ethics*, 2(1)
- McAuliffe, D., Chenoweth, I., & Stehlik, D. (2007). Rural practitioners of the future: Views of graduating students about rural child and family practice. *Rural Social Work and Community Practice*, 12(1), 6-14
- McConaghy, C. (2006). Transience and teaching: Place and the new psychoanalytic sociologies of teaching. *Education in Rural Australia*, 16(2), 47-57
- McConaghy, C., Lloyd, L, Hardy, J. Jenkins, K. (2006). Bush tracks: Journeys in the development of rural pedagogies. *Education in Rural Australia* 16(2), 13-29
- McDonald, C., & Zetlin, D. (2004). The more things change: Barriers to community service utilisation in Queensland. *Australian Social Work*, 57(2), 115-126

- McDowell, L. (1999). *Gender, identity and place: Understanding feminist geographies*. Cambridge, UK: Polity
- Milligan, C. (2001). *Geographies of care: Space, place and the voluntary sector*. Aldershot, UK: Ashgate
- Montgomery, J. (2003). The issues shared by professionals living and working in rural communities in British Columbia. *Canadian Journal of Rural Medicine*, 8(4), 255-260
- O'Connor, B.A. (2007). Wanting to be heard and included: Carers' experience of hospitals. *Health Issues Journal*, 90(Autumn), 15-18
- O'Connor, B.A., & Cannon, I. (2007). Knowing is understanding: Carer's experiences supporting people with mental health disorders dealing with hospitals. In *Proceedings of the New South Wales Carers Conference*, 101-106
- O'Connor, B.A., Bramley, J, & Gunn, R. (1983). Severely handicapped children: Children and educational needs survey in Queensland. *Report to the Shephard Project*. Brisbane: Kelvin Grove CAE
- Payne, B., Berg, B. & Sun, I. (2005). Policing small town America: Dogs, drunks, disorder and dysfunction. *Journal of Criminal Justice*, 33(1), 31-41
- Ricketts, T. (2005). Workforce issues in rural areas: A focus on policy equity. *American Journal of Public Health*, 95(1), 42-48
- Rose, N. (1996). The death of the social? Re-figuring the territory of Government. *Economy and Society*, 25(3): 327-356
- Saggers, S., & Gray, D. (1991). *Aboriginal health and society: the traditional and contemporary Aboriginal struggle for better health*. North Sydney: Allen & Unwin
- Trotter, C. (2006). *Working with involuntary clients: A guide to practice* (2nd Ed). Crows Nest: Allen & Unwin
- Veitch, C., Harte, J., Hays, R., Pashen, D., & Clark, S. (1999). Community participation in the recruitment and retention of rural doctors: Methodological and logistical considerations. *Australian Journal of Rural Health*, 7, 206-211
- Weisheit, R., Wells, L, & Falcone, D. (1995). *Crime and policing in rural and small town America*. Washington DC: National Institute of Justice
- Wilkie, M., & Newell, S. (2000). *School Communities: National Inquiry into Rural and Remote Education*. Sydney, NSW: Human Rights and Equal Opportunity Commission
- Yarrow, A., Herschell, P., & Millwater, J. (1999). Listening to country voices: Preparing, attracting and retaining teachers for rural and remote areas. *Education in Rural Australia*, 9(2), 1-12



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THE ROLE OF THE EXTENSION SERVICE IN RURAL/FRONTIER DISASTER

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ABSTRACT

This study was conducted to determine what the Extension Service's community roles and responses were during flood events and what should be done to better prepare Extension staff for future flooding in rural and frontier counties.

A survey was used to determine the extent Extension staff were prepared to respond to citizen requests for services. A joint meeting was held with emergency management organizations to clarify Extension's role in flood-related disasters. The Extension Service has a primary responsibility for providing the public with information and educational materials. Topics were identified for needed disaster-related educational materials. New materials were developed to fill the gap in previously available resources.

LITERATURE REVIEW

Preparing and responding to natural disasters requires government entities and volunteer response organizations to work together to meet the safety and subsistence needs of citizens. In the United States, the responsibility for planning at the national level for emergencies caused by natural disaster, terrorism, and man-made catastrophes lies with Federal Emergency Management Agency (FEMA) and the U.S. Department of Homeland Security (Spencer, 2010). In addition, the Red Cross and thousands of volunteers and first responders, such as police, firefighters, and medical response personnel, are all involved in emergency preparedness. Governmental agencies and volunteer organizations work together to form comprehensive emergency management plans that assure the adequate protection of the public in the event of emergencies. This requires planning prior to emergencies and responding to the needs of the public during and after an event occurs. According to Spencer, "emergency preparedness refers to actions which can and should be performed prior to an emergency" (para. 12). Emergency preparedness includes (a) meeting and coordination of efforts between response agencies, (b) writing emergency plans and procedures, (c) training and conducting emergency drills, and (d) positioning materials and supplies for use during emergencies. Spencer described emergency response as the "actions taken in response to an actual, ongoing event" (para. 12).

IMPACT OF FLOODING

Emergency planners must consider every type of event that may be encountered. The most common risks encountered by communities are natural disasters. Fritz (1961) defined the term disaster as:

An event, concentrated in time and space, in which a society, or a relatively self-sufficient subdivision of a society, undergoes severe danger and incurs such losses to its members and physical appurtenances that the social structure is disrupted and the fulfillment of all or some of the essential functions of the society is prevented. (p. 653)

When considering natural disasters (earthquakes, floods, etc.) this functionalist, or systems perspective, implies that the sources of these disasters are external in nature and cause great organizational stress within a society. This stress happens because sharp unanticipated demands are placed on the society (concerns related to public health, safety, property, etc.) which exceeds its capabilities to effectively cope with the situation it is facing (Tierney, Lindell, & Perry, 2001).

Floods are the most costly form of natural disasters in terms of human hardship and economic loss (Nelson, 2010). A flood occurs any time a body of water rises to cover what is usually dry land. Wisner, Blaikie, Connon, & Davis (1994) suggested that floods are a normal and essential component of both agricultural and ecological systems as they provide the basis for the regeneration of crops, plant and aquatic life, and of livelihoods derived from them. Humans have continually had to weigh the trade-offs of coping with the prospect of flooding with the utilization of its benefits. In the second half of the twentieth century flooding was the most common type of natural disaster reported around the globe. Annually, floods impact more people (55% of reported disaster related deaths from 1986-1995) and cause more economic loss than any other disaster occurrence.

Flood effects can be local, impacting a neighborhood or community, or very large, affecting entire river basins and multiple states. While some floods develop slowly, over a period of days; others develop quickly, and are flash floods. According to the United States Geological Survey (2007), over 75% of declared Federal disasters in the U.S. are related to floods. The National Weather Service (2011) reported that floods, more than any other hazard, result in the highest loss of property and crop damage. Between flash flooding and river flooding, river flooding results in the highest losses. In 2010, river flooding caused more than \$3 billion (US) in property damage and an additional \$1.1 billion in crop damage.

Recent flooding in eastern Australia is estimated by the Australian Bureau of Agriculture and Resources Economics and Sciences (2011) to have reduced agricultural production by \$500-600 million (AUD) in 2010-2011. Economic losses did not include the cost of lost farm infrastructure and assets that would have

significantly increased the damage amount. Reduced production of fruits, vegetables, grains, and other crops created upward pressure on prices throughout the nation.

EMERGENCY RESPONSE

Responding to flooding events places a strain on emergency response resources at the state and local government levels. This is especially true in rural and frontier areas where populations are sparse, geographically dispersed, and emergency response resources are limited. The World Bank (2011) estimated that rural areas in Australia are home to about 2.5 million people or roughly 11.4% of the population, while in the U. S. that figure approximates 20% or 65 million (Federal Highway Administration, 2000). This is important because rural regions house most of these country's farms, agricultural food handling and processing businesses, and numerous power facilities. According to the Office of Rural Health and Policy (2002), "a lack of emergency-related resources in rural areas may compromise rural readiness for future emergencies" (p. 1). Rural areas are often believed to be at a low risk when considering emergency planning, especially for the risk of terrorism. The feeling of relative safety brought on by the belief that rural areas are at a lower risk for terrorism may reduce rural communities' sense of urgency and limit preparation and responsiveness when faced with the most common costly natural threat: flooding. The Office of Rural Health and Policy believes that rural communities must be actively included in local, state and federal efforts to strengthen emergency preparedness. If not, "they may remain bystanders to their own fate. Effective emergency preparedness and mitigation efforts demand consensus and involvement from all stakeholders, including rural providers" (2002, p. 1).

Miller (2008) observed that "small communities and rural areas have a strong tradition of volunteerism and social participation" (p. 272). Rural residents tend to be closely connected socially. Information and assistance flow readily because the residents are closely connected informally through repeated interactions with family, acquaintances, and overlapping organizational memberships (Halsey, 2006). According to Miller (2008), "repeated interactions within a small community also facilitate the coordination of people. Even in unforeseen events, skills and resources availability in the community can quickly match needs" (p. 272). Emergency response planners in rural areas should capitalize on these capabilities when developing disaster preparedness and mitigation programs.

Extension has responded to a multitude of problems and crises in local communities across the country; from economic depression, to hurricanes, earthquakes, droughts and floods (Telg, Irani, Muegge, Kistler, & Place, 2007). Cartwright, Case, Gallagher, and Hathaway, (2002) found that the Cooperative Extension Service has played a key role in keeping local families, communities and businesses informed in case of emergency and/or crisis. Communication delivery methods used by Extension are wide and varied, including fact sheets, information packets, television, radio, and the World Wide Web. An important communication source is the Extension

Disaster Education Network (EDEN). EDEN (2011) is recognized as a significant multi-state effort by Extension Services to share disaster education resources. EDEN's mission is to reduce the impact of disasters by disseminating information to citizens affected by disasters (Koch, 1999).

Boteler (2007) stated that:

Continued research in disaster preparedness will increase knowledge and understanding of rural and community vulnerabilities to critical incidents; increase capacity to respond to disasters, shocks, and stresses; and develop methods to help rural governments, communities, families, and businesses achieve resiliency. (para. 43)

Tierney, Lindell, and Perry (2001) proposed that disaster research in the United States developed using a case study method that select a particular catastrophic event, identified the consequences of the disaster, and then considered the human and organizational response to the consequences. Ritchie and MacDonald (2010) indicated that issues of preparedness, response, recovery, and resilience are becoming more and more important from an evaluative standpoint than ever before as policy making bodies push for greater transparency and accountability.

The remainder of this article will concern itself with the evaluation process used by one Land Grant University in the United States to meet the training and information needs of Extension Staff for disaster recovery in rural/frontier counties after the unprecedented river and overland flooding that took place in the spring of 2009.

BACKGROUND

The Cooperative Extension Service in the United States is a collaborative venture of the federal, state and county governments. Budgeting, programming, and direction are shared by these three levels of government. This unique structure, where no one entity has dominant control, has provided the Extension Service an independence to conduct objective research and reliable information delivery (Cartwright, Case, Gallagher, & Hathaway, 2002). Over the decades, the Cooperative Extension Service has developed a "substantial body of scientific knowledge...to guide efforts in enhancing local sustainability" (Boteler, 2007). Murray (1999) determined that there are at least three elements of Extension program delivery, as practiced in the United States, that distinguish it from most of its international cousins: a university base, delivery through local county offices, and a "strong reliance on applied research at the county level" (para. 6).

The spring flood of 2009 in North Dakota placed a strain on many state and community resources including North Dakota State University (NDSU) Extension Service personnel. Extension offices are present in nearly every county in North Dakota. Their mission is to extend education to residents of all ages and walks of life,

conduct and disseminate research, strengthen agriculture, and develop the potential of youth, adults, and communities. In many communities it is the only public office representing the state and federal government.

During disaster events, rural residents rely on the Extension Service for information about how to prepare their homes and businesses for natural disasters, how to mitigate disaster impacts, and how to restore their homes and business after an event. Historically, the role of the Extension Service in the formal emergency management and planning process varied from county to county. Because many residents in the counties have long-term contacts with the Extension Service staff for educational information, the county Extension office is frequently the first contact for finding information about disaster preparedness, mitigation, and recovery.

The flooding that took place in 2009 required the mobilization of county, state, and federal emergency management teams, the Red Cross, and multiple volunteer response organizations into the flood stricken counties. The local population, unaccustomed to the array of organizations involved, often, as in the past, used the county Extension office as a source for first contact for all of their flood-related questions and needs. Extension staff struggled with the ambiguity of the primary roles of agencies and organizations deployed to the county and found that they did not have the resources to answer some of residents' requests for flood-related educational materials. Considering the extent of flooding in Australia, agencies may benefit from this study and the experience of the NDSU Extension service in responding to flooding in rural and frontier areas.

PURPOSE OF STUDY

The purpose of this study was to determine the training and information needs of county extension staff to respond to the distinct needs of rural/frontier counties by expanding disaster response training and to clarify the role of county extension staff in emergency management planning and disaster response.

The following study questions guided this study:

1. To what extent were County Extension staff prepared to respond to citizen requests for services during the flood disaster of 2009?
2. What should be the role of County Extension in disaster planning and response in relation to other disaster response agencies serving rural/frontier counties?
3. What are the gaps in the existing disaster relief training and information resources available to Extension staff in rural/frontier counties?

METHODS

This study used multiple data gathering and analysis techniques to answer the study questions. All data gathering protocols were approved by the NDSU Institutional Review Board. In the first phase of the study, a critical incident survey was developed. Flanagan (1954) developed the critical incident technique (CIT) to identify behaviors and actions that contribute to the success or failure of individuals or organizations in specific situations. To analyze a situation using CIT, a researcher first asks questions of people who are familiar with a situation for a recent example of effective or ineffective behavior. In this study, the participants had all responded to the demands of clients during a rural flood disaster. The researcher uses the answers to the questions to identify themes and then asks other involved parties to sort the incidents into proposed content dimensions. The content dimensions are then used to modify behaviors, processes, or other organizational actions to improve success in similar situations in the future.

Data Gathering Protocol

For this study, a survey was developed to determine the extent to which the Extension personnel were prepared to respond to citizen requests for services during the last flood-related disaster. The survey asked the respondents to provide information about several flood related topics. The topics are listed in Table 1. For each topic, the respondents were asked the following questions:

- What questions did you receive about this topic that you were able to answer?
- What information resources did you use to provide information to your community members?
- What questions did you receive about this topic that you were unable to answer?
- What questions did you receive from individuals/groups that were not among your typical target audiences?

The survey was sent to 24 Extension agents and support staff in the eight rural/frontier counties impacted by overland and tributary flooding. The response rate for the survey was 75% (18 of 24 responded).

Table 1. Topics for Open-ended Survey Questions

Survey Topics	
Building, maintaining, and disposing of dikes	Communications
Protecting fresh water supplies, sewage, and electrical systems	Re-occupying homes and businesses
Livestock management and livestock waste containment	City, county, and tribal government issues
Transportation	Managing volunteers
Evacuation issues (care of vulnerable individuals, elderly, pet evacuation)	Restoration of flood damaged land and property
Personal hygiene and care (showers, laundry, portable toilets, etc.)	Other topics

After completion of the survey, two (2) face-to-face, group interviews were conducted to validate the findings of the survey. Extension agents and support staff from the rural/frontier counties were invited to participate at one of two sites. Survey data results were categorized into topics and sent to the interviewees prior to the interview meeting. There were 13 participants at the first site and 11 participants at the second site. The nominal group technique was used to allow individuals to respond to the first three interview questions. The nominal group technique is a structured, group method that encourages individual participation and places equal value on each person's ideas. The fourth set of interview questions was asked and discussed in a large group setting. The interview questions included:

1. What is *not* on the list of survey responses that should be there? What is missing?
2. Information was readily available for which of the survey topics?
3. Information was difficult to locate for which survey topics? Information was not available for which survey topics?
4. What is Extension's responsibility during a flood disaster? What activities and questions should Extension handle during a flood? What activities and questions should other organizations and agencies handle during a flood? Why? What are the names of those organizations and agencies?

Based on the interview findings, the survey data were further crafted into training topics. Additionally, the data related to the perceived role of Extension in disaster response was recorded to inform further discussions of Extension's role.

Role Clarification

Following the group interviews, a survey was sent to all county Extension offices throughout North Dakota to determine whether Extension personnel were involved in their county Emergency Management plan and, if so, what role they had in the plan. The researchers then met with the Voluntary Organizations Active in Disaster (VOAD) to gain the perspective of other response agencies. During the discussion with VOAD, the topic areas identified by the critical incident study were shared and topics for which other organizations had primary control of services were identified. Following the discussion with VOAD, the list of information topics and role of Extension were further revised.

The final list of information topics and the roles of Extension were used to develop training modules and to make the modules available for quick access by webinar, written format, and/or the Extension website. The final steps in the project included the training of Extension staff, the evaluation of the training program, revisions to the training program, and the dissemination through the Extension Disaster Education Network (EDEN) to aid other states with significant rural/frontier populations.

DISCUSSION OF FINDINGS

Extension's Role in Emergency Response

Survey results showed that 53% of the county Extension offices ($n = 41$) had a defined role in their county's emergency management plan. In 47% of the responding counties, Extension was a member of the Emergency Management Board. Respondents participating in emergency planning reported the primary roles of Extension in counties were as follows:

- Provide educational information and materials using Internet-based formats.
- Organize information and inform the public about how to get information and where to go for referrals.
- Regular conference calls to field needs and generate uniform methods of distributing information.
- Listening: people come with unmet needs and Extension steers them in the right direction to meet their need.
- Collaborate with North Dakota disaster agencies to develop responses to identified needs.

After meeting with other response agencies, the scope of topics for which educational information and materials should be provided was further refined. Table 2 provides a listing of the topics for which Extension had a primary role and the topics/issues that are primarily the responsibility of other response agencies.

Table 2. Educational information and materials by primary responsible agency

Extension	Other Agencies
Clean-up topics	Disaster Communications
Livestock and crop issues	Volunteer mobilization
Food Safety	Governance and public offices
Pesticide and chemical safety	Evacuees & human services
Electrical safety	Dikes and sandbagging
Water quality	Dead livestock disposal ¹ multi-agency
Septic and sewage	
Sandbagging safety	
Pet safety and care	
Finance and insurance	

¹Note: Dead livestock disposal requires cooperation from the State Department of Agriculture, State Health Department, and the Extension Service.

County Extension staff should know the county emergency planning personnel and establish a relationship with them to keep current on county issues and needs. Staff should attend emergency planning meetings, as appropriate, and know Extension's specific role in the emergency management plan. The role of Extension in a specific county's plan may vary depending on other response agency resources present in the county. Even if the Extension office is not a formal member of the local Emergency Management Board, staff should report identified issues/needs to county emergency planners as those issues/needs emerge or are reported to the Extension office. When a disaster occurs, Extension should collaborate with other agencies to address emerging needs in the county, and continue to work on ongoing recovery needs.

Within the Extension organization, county staff should provide feedback to Extension specialists about unmet needs in the specialist's subject areas so new programs/materials can be developed. Foremost, county Extension offices should educate the public about resources available and guide them to appropriate support when other agencies have primary response duties.

Information Needs and Training Topics

Given the specified roles of Extension in emergency response and recovery, the list of educational information and training topics was further developed using the data collected from the interviews, surveys, and meetings with other response agencies. The list was used to identify where information needs were met with existing materials and what new materials needed to be developed and/or added from other sources. The major training topics identified included: clean-up (homes, farms, and businesses), food safety (handling, refrigeration), livestock and crop issues (evacuation, contamination, protection), pesticide and chemical safety (preparation, storage, disposal), electrical safety (homes, farms, businesses), water quality (contamination, quality, conservation), septic and sewage issues (containment, contamination), sandbagging and dikes (proper construction and maintenance,

logistics, disposal), and post-flood recovery (disposal, healthcare, contamination, restoration, information dissemination).

If educational materials were not available for specific topics, State Extension Specialists and the Agricultural Communications department developed web-based videos. Examples of topics for which materials were developed include Sandbag Safety, How to Build a Sandbag, Plugging Home Drains, How to use Generators, Sump Pump Tips, and Using a Moisture Meter. The Extension Service worked with the State Department of Agriculture and State Extension Veterinarian to develop protocol for removing and disposing of dead animals. All educational and training materials were uploaded to the NDSU Extension website (<http://www.ag.ndsu.edu/extension/>) and shared with the Extension Disaster Education Network, a free Internet based information repository found at <http://eden.lsu.edu>. In addition, "For Employee Only" training programs were developed by State Extension Specialists and other agencies for the following areas: Family Preparedness, Ready Business, Family Disaster Supplies Kit, Food Safety at Volunteer Feeding Sites, and Entering a Flooded Home. Further, public service announcements and radio scripts were developed for Resiliency, Food Safety, and Talking to Kids about Disasters. A special website was developed for Extension staff to share their tips on specific issues such as handling laundry in a city with no water/sewer; pet care and evacuation with no Humane Society or related organization; and protocol for locating people in high risk rural areas.

Training of Extension Staff

The final step in the Rural/Frontier Disaster Response Program was to train Extension staff on the use of the new disaster resources. A webinar was hosted to showcase new website resources, answer questions, and get suggestions for any areas that may need further development. Next, a "Speed Programming" session on Disaster Response was held at the State Extension Fall Conference. Presenters included several Extension staff involved in developing disaster response resources including: New Disaster Resources on the Web, Financial Recovery Toolkit, Family Preparedness and Ready Business Training, Strengthening Community, Agro-security Planning, and Extension's Roles in Emergency Management Plans. Following the training, an evaluation survey was sent to those who completed the training. All Extension staff responding to the survey indicated that the training met their needs and that they know where to find disaster education resources on the new website.

SUMMARY

The NDSU Extension Service is one of many public agencies that plays an important role in rural communities during natural disaster events by providing educational materials to help residents cope with disaster related issues and problems. The materials developed as a result of this project have already been used widely by extension and other emergency response agencies. It is interesting to note that, while

NDSU Extension has been working with disasters for a long time, the general public may not know that the information they use originates with Extension. For example, the North Dakota Department of Emergency Service website (<http://www.nd.gov/des/>) has posted 30 flood-related documents that were developed by Extension under the categories Information for Families, Information for Farmers, and Information for Homeowners and Renters.

In the spring and summer of 2011, the state of North Dakota experienced another record-breaking flood season. The research completed after the 2009 floods provided a wealth of information which led to the development of many resources identified as important for flood and disaster recovery. These tools are now being tested. Rural and Frontier counties, along with 3 major urban counties, experienced major flooding and the process used to develop new tools proved to be a success. Extension agents in counties impacted in 2009 are sharing tips and tools with those impacted today. The last tool developed is a *droid-based* application that allows citizens to record needed information, photos, and voice descriptions of disaster incidents. From traditional publications (paper and web-based) to You Tube educational clips and now the emerging *app* technology, NDSU Extension has worked to develop the educational information that citizens need. Technology also makes it possible for every state to share the best of its resources with anyone, in any state, using EDEN and a variety of webinars.

Recent disaster conditions experienced in western North Dakota and the City of Minot, ND, brought many citizens to realize the significance of having a county Extension presence. New audiences are emerging from the prompt service provided during the flooding. Citizens value having a trusted source of educational information and facts to aid them in the recovery. Extension provides that link to many agencies and organizations in every county of the state.

REFERENCES

- Australian Bureau of Agriculture and Resource Economics and Sciences. (2011, January 21). *The impact of recent flood events on commodities*. ABARES Special Report. Canberra.
- Boteler, F. E. (2007). Building disaster-resilient families, communities, and businesses. *Journal of Extension* [On-line], 45(6). Available at: www.joe.org/joe/2007december/a1.php
- Cartwright, S., Case, P., Gallagher, T., & Hathaway, R. (2002). Extensions role in responding to community crisis: Lessons from Klamath Falls, Oregon. *Journal of Extension*, 40(6). www.joe.org/2002december/a2.php
- Extension Disaster Education Network. (2011). *How EDEN works*. Retrieved from <http://eden.lsu.edu/Pages/default.aspx>
- Federal Highway Administration (2000). *U. S. population living in urban vs. rural areas*. U. S. Department of Transportation. Retrieved from http://www.fhwa.dot.gov/planning/census_issues/metropolitan_planning/cps2k.cfm
- Flanagan, J. C. (1954). The critical incident technique. *Psychological Bulletin*, 51(4).
- Fritz, C. E. (1961). Disasters. In R. K. Merton and R. A. Nisbet (Eds.). *Contemporary social problems*. New York: Harcourt.
- Halsey, J. (2006). Towards a spatial 'self-help' map for teaching and living in a rural context. *International Education Journal*, 7(4). 490-498.
- Koch, B. (1999). Extension Disaster Education Network Helps CES Prepare, Communicate. *Journal of Extension* [On-line], 37(4). Available at <http://www.joe.org/joe/1999august/iw1.php>
- Miller, L. M. (2008). Disaster preparedness and mitigation. In G. A. Goreham (Ed.), *Encyclopedia of rural America: The land and people: Vol. 1*. (pp. 270-273). Millerton, NY: Grey House Publishing.
- Murray, M. (1999). A contrast of the Australian and California Extension and technology transfer processes. *Journal of Extension* [On-line], 37(2). Available at: <http://www.joe.org/joe/1999april/a1.php>
- National Weather Service. (2011). *Summary of Natural Hazard Statistics for 2010 in the United States*. U.S. Department of Commerce, National Oceanic and Atmospheric Administration. Retrieved from <http://www.weather.gov/om/hazstats/sum10.pdf>
- Nelson, S. A. (2010). *River systems and causes of flooding*. Tulane University, New Orleans, LA. Retrieved from <http://www.tulane.edu/~sanelson/geol204/riversystems.htm>
- Office of Rural Health Policy. (2002). *Rural Communities and Emergency Preparedness*. Health Resources and Services Administration, U.S. Department of Health and Human Services. Author.
- Richie, L. A., & MacDonald, W. (2010). Enhancing disaster and emergency preparedness, response, and recovery through evaluation. In L.A. Richie & W. MacDonald (Eds.) *New Directions for Evaluation*, 126, 1-7.
- Spencer, K. (2010). *Emergency preparedness and response :Frequently asked questions*. Rural Assistance Center. Retrieved from http://www.raconline.org/info_guides/preparedness/faq.php#difference.

- Telg, R., Irani, T., Muegge, M., Kistler, M., & Place, N. (2007). Communication efforts of Florida extension agents during the 2004 hurricane season. *Journal of Extension* [On-line]. 45(3). Available at: www.joe.org/joe/2007june/a4.php
- Tierney, K. J., Lindell, M. K., & Perry, R.W. (2001). *Facing the unexpected: Disaster preparedness and the response in the United States*. Washington, D.C: Joseph Henry Press.
- United States Geological Survey. (2007, February). Natural hazards: A national threat. (Fact Sheet 2007-3009). United States Department of the Interior .Retrieved from <http://pubs.usgs.gov/fs/2007/3009/2007-3009.pdf>
- Wisner, B., Blaikie, P., Connon, T., & Davis, I. (1994). *At risk: Natural hazards, people's vulnerability and disasters*. London: Routledge Taylor & Francis Group.
- World Bank (2011). *Rural population in Australia*. Trading Economics. Retrieved from <http://www.tradingeconomics.com/australia/rural-population-wb-data.html>

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