

INTERDISCIPLINARY JOURNAL CLUB: ADVANCING KNOWLEDGE TRANSLATION IN A RURAL STATE

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ABSTRACT

Professionals who provide health and related supports and services to children with disabilities in educational programs and community settings must practice in an evidence-based manner to ensure children and families receive the highest quality care. Vermont's Interdisciplinary Journal Club provides a successful approach to supporting professional development of rural professionals through a variety of knowledge translation activities, including: (a) building relationships and communities integral

to the sharing and application of current knowledge; (b) overcoming barriers of time, distance and various levels of research skill; and (c) collaboratively identifying topics of interest and discussion that include skilled interpretation of research and experiential knowledge of stakeholders. This article describes the structure, processes and evaluation strategies of the Journal Club. Challenges identified over three years of implementation and related solutions may be helpful for groups who are interested in initiating a similar knowledge translation activity for rural interdisciplinary professionals on a regional or statewide level.

INTERDISCIPLINARY JOURNAL CLUB: ADVANCING KNOWLEDGE TRANSLATION IN A RURAL STATE

Professionals such as physical and occupational therapists, speech-language pathologists, and others utilize their discipline-specific training and knowledge as they provide services and supports to children with disabilities in school and community settings. These individuals are faced with the challenge of accessing, critically appraising, and interpreting current research in order to provide a consistently high standard of care and to remain “highly qualified” as required by special education regulations (No Child Left Behind Act of 2001) and their professional licensing organizations (Lin, Murphy, & Robinson, 2010; U.S. Department of Education, 2006;). The purpose of this article is to describe Vermont’s Interdisciplinary Evidence-Based Journal Club (hereafter referred to as Journal Club) as a strategy to support professional development and improve practice of rural professionals. The concepts of evidence-based practice and knowledge translation (Law, 2002; Lencucha, Kotari, & Rouse, 2007) have informed the planning, development and implementation of Journal Club over the past four years.

Vermont, like many rural states, faces shortages in early intervention and special education personnel, including related service providers (Boyer, & Gillespie, 2004). Practicing occupational and physical therapists and speech-language pathologists who choose to work in more rural communities often find it difficult to access resources that can support their professional development and enhance their delivery of services (Ludlow, 1998). Independent providers or those who work in small agencies frequently lack on-the-job coaching from more experienced professionals and opportunities to attend courses and training relevant to their work with children and families. Many professionals working outside of a hospital and university setting experience difficulty accessing libraries, journals and electronic resources critical for remaining abreast of changes in their fields (Center on Personnel Studies in Special Education, 2004). Professionals educated more than 20 years ago may

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be unfamiliar with critical appraisal skills relevant to current research in their own and other disciplines (Swinth, Spencer & Jackson, 2007). Many providers find themselves interacting more closely with professionals from other disciplines than they do with members of their own profession (Ludlow, 1998). Geography and weather constitute additional access challenges for professional development in rural states such as Vermont, where mountain roads are sometimes treacherous or muddy, winters are severe and cell phones and high-speed internet coverage is not universal. These professionals need to access and share new knowledge, often across disciplines, in order to develop the skills required to provide high quality services to children who have a range of diagnostic labels and who are receiving their education and services through a variety of local programs.

The term “evidence-based practice” emerged in the 1980s to describe the efforts of professionals to provide the best care possible in light of the rapidly growing body of research and increasing demands for clinical decision making that reflect current best evidence (Bennett & Bennett, 2000). Evidence-based practice is life-long, self-directed learning to incorporate best research evidence, professional expertise and patient values in making decisions about diagnosis, assessment and intervention (Sackett, Straus, Richardson, Rosenberg, & Haynes, 2000). Lin, Murphy, and Robinson (2010) have outlined five essential steps in generating evidence to improve practice: (a) formulating good clinical questions, (b) effective searching for best evidence, (c) analyzing the validity of research findings, (d) integrating new knowledge with professional judgment and client experiences, and (e) evaluating the implementation of new knowledge. They further emphasize the importance of a sixth step, disseminating new knowledge to other professionals and consumers, which is addressed in the emerging literature of knowledge translation.

The term “knowledge translation” is generally used as an umbrella concept that encompasses the principals and strategies of evidence-based practice and, in addition, addresses how new knowledge is used. Knowledge translation, as articulated in 2005 by the Canadian Institutes of Health Research (CIHR), expands the concept of evidence-based practice to include steps that need to occur between the creation of knowledge through research and its application to benefit consumers (Canadian Institutes of Health Research, 2004). Fyfe, Hampe, Hardy, Bentham, MacLeod, and Mogus (2007) describe knowledge exchange and synthesis as two important aspects of knowledge translation. Knowledge exchange, “a reciprocal learning that builds capacity in both researchers and research users” (p. 3), involves collaboration between researchers and those who will be using it. Knowledge synthesis is the process of searching for and summarizing relevant literature so that it can be useful to

practitioners and consumers. Both of these aspects are critical to the success of knowledge translation efforts.

The growing emphasis on knowledge translation is not unique to health care professions. The concept is common to many other professions, including education, business, and psychology, and is known by various names such as technology transfer, knowledge management, knowledge transfer, and change management (Sterling & Tetroe, 2006). Knowledge translation efforts are discussed in the literature as a promising approach for improving professional development for practitioners (McWilliam, 2007). Traditionally, strategies for gaining and using new knowledge have included an individual's involvement in a combination of academic courses or conferences, reading, use of databases and journals, and their own experiences working with others and with their clients. Barriers to these strategies include time, access to information, workload pressures and inability to interpret research findings, including understanding of concepts such as validity, reliability and transferability of findings (Lenchucha, Kathari, & Rouse, 2007). Further, it is doubtful whether these traditional strategies engaged in by individuals are the most effective ways to enhance knowledge translation. Learning within communities of professionals is now seen by many as an essential component of acquiring and using knowledge (Law, Missiuna & Pollock, 2008; Lenchucha, Kathari, & Rouse, 2007).

McWilliam (2007) describes knowledge translation as an evolving continuing education strategy. One category of shared knowledge, which McWilliam labels "transformative KT", is particularly well suited to groups of interdisciplinary personnel who strive to consider research findings across disciplines and create active learning partnerships. The concept of knowledge translation within interdisciplinary groups and support for networks of knowledge is also evident in emerging health and education policy (Canadian Institutes of Health Research, 2008; U.S. Department of Education, 2007). The U.S. Department of Education's Office of Special Education and Rehabilitation Services (OSERS) and its National Institute of Disability and Rehabilitation Research (NIDRR) both identified the importance of knowledge translation and the need to diversify knowledge translation activities as critical for achieving advancement in applied research to benefit persons with disabilities (U.S. Department of Education, 2007).

There is no clear or optimal strategy for enhancing knowledge translation (Law, Missiuna, & Pollock, 2008). Traditional methods such as short-term workshops and sharing journal articles are seldom effective in changing practice of professionals (Lin, Murphy, & Robinson, 2010). Emerging strategies that utilize technology, such as Internet searches, development of professional

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databases and short summaries of research findings can offer greater access to evidence based research. Other promising strategies include social learning groups, such as communities of practice that focus on the need to access and use new research-based knowledge. Communities of practice (Wenger, 2006) are described as learning mechanisms for groups of individuals with a common interest. Communities of practice that utilize technology and focus on the need to access and use new knowledge and current research are well suited for meeting the professional development goals of individuals working in rural areas (White, Basiletti, Carswell, Head, & Lin, 2008).

A journal club can be an effective strategy for addressing both the broader social learning goals of communities of practice and the more specific goals of knowledge translation, exchange and synthesis. Journal clubs provide user-friendly approaches to support individuals to come together, review the most current available information and discuss how research can be applied to improve practice (Sherratt, 2005). Journal club members can share the tasks of identifying important clinical questions and searching for relevant research, thus reducing the amount of time required of individual members. Interdisciplinary journal clubs have increased collaboration in clinical practice and are effective in building links among participants. They provide a forum for identifying common concerns and questions, sharing and synthesizing knowledge generated within various disciplines, and fostering interdisciplinary dialog related to the application of new knowledge (Hunt, 2006). When provided in an accessible format and location, a journal club can provide a structure to support the professional development of individuals who work in a variety of settings, and even extend evidence-based knowledge to regional, statewide and national audiences.

JOURNAL CLUB STRUCTURE

Vermont professionals recognized a need to access and share new knowledge and provide evidence-based interventions for the children and families. Journal Club grew out of a year-long statewide community of practice for school-based occupational therapists that began in 2005 and evolved as a more targeted strategy for a larger interdisciplinary group of therapists to address their professional development needs. Journal Club was planned so that it maintained the essential concepts of a community of practice while addressing issues related to knowledge translation, synthesis, and exchange as described in emerging health and education literature. The following criteria were felt to be important for developing a journal club experience in rural Vermont: (a) building relationships and communities that are integral

to the sharing and application of knowledge (Lenchucha, Kothari, & Rouse, 2007); (b) overcoming barriers of time, distance and different levels of research and practice skills (Law, 2002; Lenchucha, Kothari, & Rouse, 2007), and (c) collaboratively identifying topics of interest and discussion that elicit both the skilled interpretation of research results and the experiential knowledge of interdisciplinary stakeholders (McWilliam, 2007). Vermont's Journal Club also sought to address the need for acquiring continuing education credits for fulfilling professional licensure requirements of the state, and to disseminate findings of the Journal Club to professionals and consumers statewide.

CONTEXT FOR INTERDISCIPLINARY PROFESSIONAL SUPPORT

Journal Club is an activity of TRIPSCY (Training and Resources for Interdisciplinary Providers Serving Children and Youth), which is a larger project supporting interdisciplinary professionals in the health and education systems providing services to children with disabilities. TRIPSCY is a program within the Center on Disability and Community Inclusion (CDCI), Vermont's University Center for Excellence in Developmental Disabilities at the University of Vermont. A TRIPSCY web site (<http://www.uvm.edu/~cdci/tripscy/>) contains online resources for professionals, families and the community, including a registry of interdisciplinary professionals, employment postings, secondary transition information, workshop announcements and materials, a list serve for information sharing, and links to state, national and international disability organizations and programs. TRIPSCY is funded by CDCI and the Vermont State Department of Education and supported by several other state agencies and University programs.

RECRUITMENT AND MEMBERSHIP

Information about Journal Club activities and an invitation to participate is shared bi-annually through the TRIPSCY listserve and is available to all relevant professionals in Vermont. The TRIPSCY list serve is a voluntary email list for related service to share continuing education opportunities and clinical practice information. The Journal Club web page of the TRIPSCY website summarizes the aims of this activity: (a) to enhance the critical appraisal skills of interdisciplinary professionals working with children and youth who have disabilities; (b) to enhance interdisciplinary professionals' ability to integrate research evidence into practice; and (c) to disseminate evidence-based practice information to interdisciplinary professionals in Vermont in the form of topical fact sheets. There is no cost for participation in Journal Club. Journal Club is coordinated by physical

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and occupational therapists at the CDCI who are experienced researchers through their involvement in grant funded projects and doctoral studies. In year one and two, membership was largely limited to occupational and physical therapists and a few special educators, with 40 participants in 2006-2007 and 42 participants in 2007-2008. In 2008-2009, there were 50 participants, including speech-language pathologists, special educators, nutritionists, psychologists and social workers. Participants included university faculty and graduate students as well as community-based professionals throughout the state.

MEETINGS AND ROLES

Journal Club meetings are scheduled three to four times during the academic year. The yearly schedules and topics are shared in August. Meetings occur in four to six sites throughout the state on Interactive Television and usually begin in the late afternoon, after work hours. Journal Club coordinators may be at any of the sites. Individuals pre-register in order to determine how many sites will be used. Meetings last two hours and typically include a training component and three or four article reviews on the preselected topics by volunteer members. It is expected that each participant will review at least 1 article per year. Theses brief topical trainings are design to enhance the critical appraisal skills of participants on topics such as study bias and measurement tool psychometric properties. It is planned for these trainings to become online modules for participants to access via the Journal Club web pages at their convenience. Agendas and references for research articles are posted on the TRIPSCY website prior to each meeting. Participants sign in and out at each site so that hourly Continuing Education Unit certificates can be compiled at the end of the year.

At each Journal Club meeting, roles are assigned to volunteers based on the collaborative teaming model described by Johnson & Johnson (2000). The roles of facilitator, recorder and timekeeper are self-explanatory. The keeper of the rudder's role is to ensure that the group comes back to the topic if the conversation has strayed. The role of the processor is to invite others to assess how well the meeting addressed the Journal Club's goals and completed activities as stated in the agenda, and how members worked together as a group, making suggestions to improve future meetings. The wellness provider's role is to share a success story, poem, picture, or thought that ensures that the meeting ends on a high note.

A typical Journal Club meeting agenda includes: (a) welcome, check-in, reminder to sign-in, and beginning or end of year survey (10 minutes); (b) Journal Club process-review for new participants and/or training topics (10-15 minutes); (c) choice of the meeting topic and literature review, including

a description of literature search techniques and results (5 minutes); (d) presentation of reviewers' summaries and critical appraisals (45-60 minutes, 15 minutes per article); (e) discussion (30 minutes); (f) plan for next meeting (5 minutes); (g) processing and wellness (5 minutes).

JOURNAL CLUB EVALUATIONS

Participants in the Journal Club complete pre- and post self-assessment surveys at the first and last meeting each year. They also report their end-of-year reflections regarding the quality, relevance and usefulness of the Journal Club to their clinical practice. The self-assessment survey was developed by Journal Club coordinators as no survey available in the literature captured all aspects that warranted appraising. Figure 1 depicts the survey designed for participants to rate their skills and knowledge using a five-point Likert scale in each of three areas: access to research, critical appraisal skills and implementation. The change in knowledge of participants reported from the beginning of year one (December, 2006) through the end of year three (May 2009) is summarized in Table 1, indicating gain in all three areas. The Journal Club has open enrollment consequently not all the participants attend all the meetings in a given year nor all three years of Journal Club meetings to date. A core group of participants ($n = 20$), primarily pediatric occupational and physical therapists, attended most meetings. Thus, the change of knowledge information in Table 1 is a general measure of change of participants who attended the given meeting when the self-assessment was conducted. End of the year reflections are gathered in large group format and recorded on videotape. Journal Club coordinators synthesize the reflections and provide specific quotes to illustrate important points for the end of the year report and to make changes to the Journal Club for next year. These substantiate the change of knowledge noted in the survey with quotes from participants such as "I can read a study and be more comfortable determining the quality of study application to my practice" and I am "more critical of whether an intervention has evidence behind it".

CONTINUING EDUCATION CREDIT

Each participant receives a certificate via e-mail at the end of the year documenting the number of hours he or she attended Journal Club. They can use these certificates to meet their national or state professional continuing certification requirements. Journal Club can be taken for credit through the Interdisciplinary Leadership Education for Health Professionals Program toward fulfillment of the requirement for the Certificate of Graduate Studies in the Interdisciplinary Study of Disabilities at the University of Vermont.

Figure 1. Pre and Post Participation Survey

TRIPSCY Journal Club Evaluation
Academic Year:

Self Assessment: For each item, circle the number which most appropriately represents your evaluation of your skills at this time. The highest rating is 5 (strongly agree) and the lowest is 1 (strongly disagree).

ACCESS					
1. I can define evidence-based practice.	1	2	3	4	5
2. I have access to quality literature to inform my practice.	1	2	3	4	5
3. I know how to conduct an efficient literature search.	1	2	3	4	5
4. I know how to pose a question that will yield evidence that can be applied to my practice.	1	2	3	4	5
CRITICAL APPRAISAL SKILLS					
1. I can ascertain whether the sample of a study was appropriate (e.g., sample size, minimum bias & similarity between groups)	1	2	3	4	5
2. I can identify the study design and the level of evidence associated with it.	1	2	3	4	5
3. I can ascertain whether the assessments or outcome measures used in a study are valid and reliable.	1	2	3	4	5
4. I can ascertain whether the analysis method of a study was appropriate.	1	2	3	4	5
5. I can ascertain the applicability of a study to the children and team I work with.	1	2	3	4	5

Figure 1. (Continued)

IMPLEMENTATION					
1. I have strategies to implement newly acquired study findings into my practice.	1	2	3	4	5
2. I have strategies to ascertain whether newly implemented practices are resulting in better outcomes for the students/children I work with.	1	2	3	4	5
3. I am comfortable sharing relevant study findings with parents, school staff and other health professionals.	1	2	3	4	5
4. I can prepare quality evidence-based review fact sheets.	1	2	3	4	5

Table 1.

Journal Club Participants Self-Rated Change of Knowledge from 2006 to 2009.

	Access to Research	Critical Appraisal Skills	Implementation
Pre-Test September 2006 (n = 16)	3.10*	2.80	3.09
Post-Test May 2009 (n = 20)	3.88	3.76	3.98
Increase	0.78	0.96	0.89

*Each area was rated on a 5-point scale.

JOURNAL CLUB PROCESS

The Journal Club provides a process for Vermont pediatric therapists to stay abreast of research literature and develop knowledge translation skills on various levels. Each Journal Club meeting includes a training component related to knowledge translation and a review of research literature related to a high priority topic. The process includes the following steps:

1. A training agenda is developed by participants and coordinators to ensure that members feel comfortable with the elements of evidence-based practice and the processes of literature review and research analysis used by Journal Club. Training is provided and reviewed each year regarding the elements of quality research, addressing concepts of reliability, validity, power and levels of research evidence.
2. Journal Club members develop and share high priority clinical practice topics as a group. This occurs as a brainstorming activity as part of the end of the year reflection at the last Journal Club meeting. Coordinators assist in the refinement of a focused "PICO" question that identifies the patient or population (P), the specific intervention that is addressed (I), a comparison intervention or non-intervention control group (C), and the outcomes that are of interest (O) (Lin, Murphy, & Robinson, 2010; Sackett, Rosenberg et al., 1996). Based on the input of the members, four or five high priority topics and PICO questions are selected for the coming year's agendas.
3. Journal Club coordinators review literature resources on selected topics utilizing the resources of the university and medical school libraries. They implement and record search strategies to identify relevant literature that addresses the PICO questions.

4. Each selected article is reviewed by two Journal Club volunteers. They work together to read and review the article and submit it prior to the Journal club meeting. Reviews are written using templates developed by McMaster University (Law, 2002). During the first two years of the Journal Club these reviews were done collaboratively by a Journal Club volunteer and a coordinator so that hands-on training could be provided.
5. Reviews are disseminated to Journal Club members electronically via the TRIPSCY list serve prior to the meeting.
6. At the Journal Club meeting, the coordinators review the search strategy used and the rationale for selecting the articles that will be reviewed to address the research question. Reviews are then presented by the volunteer(s) for each article.
7. There is a brief discussion of clinical relevance among participants in all locations and the "Take Home Message" is summarized, reflecting the research implications and professional experience of participants.
8. Community coordinators, in collaboration with Journal Club participants, prepare a Fact Sheet that summarizes the article reviews for each topic addressed and Fact Sheets are made available to others on the TRIPSCY website. Current posted Fact Sheets include: (a) constraint induced therapy in children with cerebral palsy, (b) partial body-weight support as intervention with pediatric population, (c) sensory integration effect on school performance, (d) handwriting remediation versus assistive technology, (e) Botox injection for upper and lower extremity spasticity, and (f) effects of stretching programs in children with cerebral palsy.

LESSONS LEARNED

The Journal Club has been operational for three full years and is currently in its fourth year. There have been a number of challenges identified over the years and some solutions that may be helpful for groups who are interested in initiating a similar knowledge translation activity for rural interdisciplinary professionals on a regional or statewide level. In general, the factors identified as important in planning for the Journal Club in the context of rural Vermont were addressed as described in Table 2. Other challenges and opportunities have arisen and are described in Table 3.

In summary, there are challenges and, at the same time, new approaches and technologies for supporting the professional development needs of inter-

Table 2.

Effective Solutions for Addressing Important Knowledge Translation Factors.

Important Knowledge Translation Factors	Effective Solutions
1. Building relationships and communities that are integral to the sharing and application of knowledge	Journal club members who live and work throughout the state are able to easily access Journal Club meetings and materials using available technology, (i.e. Interactive Television, Journal Club webpage). A core group of members has maintained membership and contributed to knowledge translation efforts for over 3 years. Most members have participated for more than one session each.
2. Overcoming barriers of time, distance and different levels of research and practice skills	The tasks of literature review, research review, presentation, and formulation of fact sheets are shared among Journal Club members. Members can access meeting locations close to where they live. A portion of each meeting is dedicated to improving consumer and/or practitioner research skills. Members share their experiences related to research findings in their statewide practices.
3. Collaboratively identifying topics of interest and discussion that elicit both the skilled interpretation of research results and the experiential knowledge of interdisciplinary stakeholders	Journal Club members identify high priority topics for the academic year and refine them as PICO questions so that targeted peer reviewed literature of a variety of disciplines can yield relevant research. Members are taught research analysis strategies, and present materials in a consistent manner and reflect on the research relative to their own practice and discipline.
4. Addressing the need for continuing education credits required as part of professional licensure requirements of the state or academic programs.	Continuing Education certificates are issued for all members reflecting the hours of participation in Journal Club to document required professional development activity.
5. Disseminating findings of the Journal Club through topical fact sheets posted on a website	Journal Club Co-coordinators develop Fact Sheets on topics that have been reviewed, and make them available for review and download to other professionals and consumers via the internet.

Table 3.

Challenges Encountered and Lessons Learned in Establishing a Statewide Interdisciplinary Evidence Based Journal Club.

Challenges Encountered	Lessons Learned
<p><i>Leadership</i></p> <p>Trained researchers are essential partners</p>	<p>Coordinators who are skilled and knowledgeable in research, or researchers themselves, provide essential training and leadership for journal club members. Doctoral students, research practitioners and/or university faculty can serve as a valuable link between sources of new knowledge and professionals and consumers who can apply it. Experienced researchers can share their knowledge of current concepts in research analysis, and have access to resources such as libraries and literature databases that their community service provider partners are often unaware of, or unable to easily access.</p>
<p><i>Funding</i></p> <p>In addition to the cost of personnel time from the CDCI, there were costs incurred for interactive TV sites, copying and mailing of articles to reviewers.</p>	<p>CDCI is the Vermont Center for Excellence in Developmental Disabilities Education, Research and Service (UCEDD). Each state has at least one UCEDD that is affiliated with a university or training hospital. UCEDDs provide training related to developmental disabilities for interdisciplinary personnel and families. They should be a logical resource for coordination of this type of activity. When searching for additional funding, we have learned to tap any program that has the words <i>interdisciplinary</i>, <i>developmental disabilities</i>, <i>knowledge translation</i> or <i>special education/early intervention</i> in their title. These programs may be able to contribute to certain aspects of the program. In Vermont, the Leadership Education in Neurodevelopmental Disabilities Program, federally-funded by the Bureau of Maternal and Child Health is called, the Interdisciplinary Leadership Education for Health Professionals; it pays for the use of interactive TV sites. The Vermont Department of Education contributes money to support a coordinator's time. Although there is no cost to participants, they are now responsible for downloading and printing their own materials from the web.</p>

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Table 3. (Continued)

Challenges Encountered	Lessons Learned
<p data-bbox="193 349 646 392"><i>Interdisciplinary perspectives</i></p> <p data-bbox="193 392 646 562">The interdisciplinary nature of the Journal Club is highly valued by participants. Ensuring that all have the opportunity to contribute and learn from each other is important.</p>	<p data-bbox="646 349 1095 807">The Journal Club began with physical and occupational therapists and a few special educators. Over time, more disciplines have been represented. It is important to address clinical issues that are relevant across disciplines. It becomes important to reflect various perspectives in the formulation of PICO questions and to access a wide body of professional literature. Selecting topics well in advance provides an opportunity for new interdisciplinary members with a particular interest in the topic to plan to attend and contribute.</p>
<p data-bbox="193 807 646 877"><i>Expectations for participation, discussion and feedback</i></p> <p data-bbox="193 877 646 1047">Participants who are unfamiliar with the formulation of clinical questions, the procedures for literature review and/or research analysis are often overwhelmed by the process.</p>	<p data-bbox="646 807 1095 1302">Participants may have expected a more informal clinical sharing forum than they have experienced in other journal clubs. Balance is the key. It is important to teach research skills <i>and</i> provide opportunity for discussion of personal relevance in the clinical setting. Do not be surprised if initial participant feedback reflects frustration with the process and a desire for more informal talk. Over time, participants develop greater interest and skill in research analysis. Individuals with too many stories to tell may begin to frustrate the process oriented participants.</p>
<p data-bbox="193 1302 646 1344"><i>Confidentiality and Professionalism</i></p> <p data-bbox="193 1344 646 1479">In a small rural state it is important to remind participants of confidentiality requirements and to model appropriate profession behavior.</p>	<p data-bbox="646 1302 1095 1630">A child with a specific diagnosis living in the state can be known to many participants, even when names are not used. Similarly, discussion regarding other professionals and their practices can be counter productive. Participants who stray into stories that may divulge personal information or be critical of others need to be skillfully and gently brought back to the research topic.</p>

Table 3. (Continued)

Challenges Encountered	Lessons Learned
<p><i>Mutual support among Journal Club members</i></p> <p>Volunteering to review an article and present it to the group on TV may be intimidating for new members.</p>	<p>Pairing experienced reviewers with new reviewers helps. Similarly, writing the summary Fact Sheet for posting on the web often requires review and support from coordinators and other experienced journal club members.</p>
<p><i>Increasing research analysis and application skills</i></p> <p>Journal club members are provided with annual reviews of the rationales, principles and processes of research review.</p>	<p>For some members this can be repetitive, but for others it is new information. Maintaining information from training Powerpoints on the webpage facilitates the training and review process. All members can share this information with others in their work environments to increase awareness of the importance of evidence based practice and research.</p>

disciplinary professionals in rural settings. Use of available technologies such as Interactive TV, internet websites, email, web video, and online library literature searching mechanisms have helped to address many of the challenges of professional development, including access, cost and time. Other challenges remain to be resolved on a year-by-year basis, including funding, increased interdisciplinary participation and leadership. In Vermont, the Journal Club has proven to be an effective strategy for developing a network of interdisciplinary professionals focused on common problems, issues and concerns encountered in their practices statewide. It has also been effective in increasing member access to clinically relevant research and in providing training in skills required for analysis of that research. Journal Club embraces the principles and intent of both Communities of Practice and knowledge translation approaches by building a focused network of support for assessing current interdisciplinary research and changing or modifying professional practices based on the best current evidence. In the future, Journal Club members may be able to support individual or collaborative research efforts of its members as they address the many unanswered questions they continue to encounter in everyday practice.

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