Interprofessional Collaboration for Children with Special Healthcare Needs: A Review of Effective Education Integration

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Interprofessional Collaboration for Children with Special Healthcare Needs: A Review of Effective Education Integration

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With the innovation of technology, increased medical knowledge, and improved treatment techniques, the education of children with special healthcare needs is no longer restricted to hospitals. The current paper examines issues surrounding interprofessional collaboration (IPC) between educators, medical professionals, and allied health professionals in the school setting. Specifically, this paper disseminates the literature on interprofessional collaboration through the examination of the current state of IPC between the health and education sectors when accommodating students with complex medical needs. The aspects of IPC that are in need of improvement are identified along with recommendations for the improvement of IPC in the context of children with special healthcare needs.

Key words: Medical complexity, interprofessional collaboration, health, education

As a result of technological advances, increased medical knowledge, and improved treatment techniques, more children with special healthcare needs (CSHCN) are spending less time in hospitals and more time receiving treatments as outpatients (Shaw & McCabe, 2008). As a result, the paradigm of providing schooling for CHSCN in hospitals is being replaced with one that can accommodate students in their own homes and in mainstream schools (Robinson & Summers, 2012). This paradigm shift has created the need to ensure that transitions from hospital to school are made as seamlessly as possible. To accomplish this, hospital-to-school transition plans must be
developed and implemented so that appropriate accommodations are provided to CHSCN students (Shaw & McCabe, 2008). The development of effective transition plans requires efficient interprofessional collaboration. By addressing the following questions, this paper examines the current practice of interprofessional collaboration (IPC) between health providers and schools:

(1) What is the current state of IPC between the health providers and schools when accommodating students with complex medical needs?

(2) Can the current state of IPC be improved?

The Maternal and Child Health Bureau defines CSHCN as "children who have or are at increased risk of a chronic physical, developmental, behavioral, or emotional condition and require healthcare and related services of a type or amount beyond that required by children generally" (Cohen et al., 2011, p. 529). As this definition demonstrates, there is considerable variation in the medical complexity experienced by children with CSHCN. However, according to Cohen et al. (2011), CSHCN’s medical complexity typically encompasses the four following domains:

Needs: Children with medical complexity (CMC) are characterized as having substantial healthcare service (i.e., medical care, specialized therapies) and educational needs.

Chronic condition(s): CMC have one or more chronic condition(s) that are severe and/or associated with medical fragility. The condition(s) are usually life-long and the children may also experience lasting effects from treatments.

Functional limitations: These limitations are usually severe and may require the use of technologies such as a tracheostomy tube, feeding tube, or wheelchair. A child's functional limitations may also vary over time.

Healthcare use: CMC have high projected usage of
healthcare resources. These may include prolonged hospitalizations, multiple surgeries, and the ongoing involvement of multiple specialty services and providers.

Due to the decreased quality and increased cost of targeted educational and medical support services, and due to an increased need for coordination between multiple specialties, the diverse needs of CSHCN are often not effectively met in the classroom (McClanahan & Weismuller, 2015).

**IPC and Education**

The medical complexity of CSHCN has significant implications for the field of education. Specifically, their medical complexity requires the provision of modifications and accommodations, which are best achieved through effective IPC (Alquraini & Gut, 2012). Effective IPC requires that all professionals involved in a student's health and education communicate with each other about the student's progress, strengths, needs, and any other relevant information. Effective collaboration between educational and health professionals permits for smoother transitions between hospital or home-based care and the return to the school setting (Madan-Swain, Katz, & LaGory, 2004; Robinson & Summers, 2012).

IPC has been shown to improve collaboration, patient care, and health outcomes (Kitts, Christodoulou, & Goldman, 2011). These improvements occur because different disciplines can inform and enhance one another's clinical or academic practices (Kitts et al., 2011). The medical profession has recognized the importance of IPC and, as a result, is now incorporating IPC as part of their certification and degree programs (Margison & Shore, 2009; Salm, Greenberg, Pitzel, & Cripps, 2010; Schocken, Schwartz, & Stevenson, 2013). While the field of education recognizes the importance of IPC, faculties of education have yet to formally address IPC as part of their programming (Salm et al., 2010). Unlike other professional faculties (e.g., nursing, medicine, and psychology) where students immediately learn to collaborate with other professionals, faculties of education remain a siloed environment, focusing strictly on teaching (Salm et al., 2010). This siloing is ironic, since schools are often...
promoted to be the central location for service provision as well as health promotion and social action. Educators are expected to participate in, and often coordinate, interprofessional collaboration for students with exceptionalities and medical complexity, and yet, they are arguably the least prepared to work on such a team since their education and training does not include this aspect (Salm et al., 2010).

**Interprofessional Collaboration: Barriers**

In North America, the importance of IPC with regard to meeting special education needs has been recognized since the 1970s (Graham & Wright, 1999). In the United States, many CSHCN became eligible for educational accommodations under Section 504 of the Rehabilitation Act of 1973 that would facilitate their integration into mainstream classrooms (Shaw & McCabe, 2008). At this time, schooling was starting to move away from a dual-track system, where special education existed as a subsystem of regular education with separate pupils, teachers, and funding systems (Stainback & Stainback, 1984). Mainstreaming required additional supports and services to be available in the classroom to support CSHCN, which resulted in the need for increased IPC (Stainback & Stainback, 1984; Thomson, 1984).

It became obvious in the 1980s that, even though IPC was a promising approach, it was significantly more difficult to implement than anticipated (Graham & Wright, 1999). One of the main difficulties encountered was that the schools’ para-educational professionals were siloed within a prescribed specialization consisting of unique aims, experiences, and training (Thomson, 1984). Furthermore, professional jurisdictions did not always overlap or involve similar stakeholders (e.g., health authorities and educational authorities) (Thomson, 1984). Therefore, a lack of communication between service providers and the resulting conflicts between professionals became common (Graham & Wright, 1999; Kitts et al., 2011).

Today, despite attempts for successful IPC, barriers still arise. These barriers include privacy rights, hidden agendas, dominant personalities, and competition among the different specialties and health/educational sectors (Margison & Shore,
2009). All of these barriers prevent the optimization of the assistance provided to CSHCN in their educational endeavors. In order to establish a common ground between disciplines, developing and communicating common goals and objectives are essential (Giacomini, 2004). In order for IPC to work, all professionals need to communicate equally and effectively and remember that the purpose of their collaboration is the well-being and best interests of the student with special healthcare needs.

Interprofessional Collaboration: Overcoming Barriers

A lead example of effective IPC can be found in the United Kingdom. What sets the United Kingdom apart from other countries is the fact that it has specific legislation and policies in place regarding how the education of CSHCN should occur. In England, the law states that students who cannot attend school due to chronic or complex illness are to be provided with an education similar to that available at school (Department for Education, 2010; Department for Education and Skills, 2001; Robinson & Summers, 2012). Furthermore, it falls on school leaders to ensure that a policy is in place that involves the close communication between the teachers, the hospital, and home. To make this happen, hospital-based teachers communicate with CSHCN’s regular classroom teachers in order to facilitate a smooth transition between the hospital and school (Robinson & Summers, 2012). Furthermore, professionals involved in the care of CSHCN visit schools in order to provide information related to the child’s health and related needs to his or her teachers (Robinson & Summers, 2012). This type of collaboration is designed to allay fears and concerns amongst educators and peers alike, as a child with special healthcare needs re-enters the classroom after a period of prolonged absence due to illness.

The dominant focus of the United Kingdom model is on a unified service provision where all members of various teams (medical, educational, or other) communicate and collaborate for the ease of the student’s transitions from hospital to home to school (Department for Education and Skills, 2001). It is recognized that effective liaisons between key partners minimizes
the disruption that is caused by illness to a student's education; as such, local educational authorities and schools are expected to nominate a point-person to coordinate the education of CSHCN students, who often need to transition in and out of the conventional school setting. The Department for Education and Skills (2001) also recommends that health, social services, and educational professionals undergo a common training and professional development to assist in the transition to an interdisciplinary approach to care and education of CSHCN.

While North America lags behind the United Kingdom in terms of IPC for CSHCN students, there are some states and provinces that are attempting to develop similar systems. That CSHCN students require multiple services from multiple sectors makes it challenging to implement coordinated IPC between medical and educational professionals for the development of effective education plans. One of the main challenges to overcome is how to bring highly educated and specialized individuals together and expect a high level of collaboration when differing ideologies, scopes of practice, and specializations often interfere with effective IPC. One university in Saskatchewan, Canada is attempting to address this challenge.

The United Kingdom's Department for Education and Skills (2001) recommended that health, social services, and educational professionals undergo a common training and professional development to assist in the transition to an interdisciplinary approach to care and education of CSHCN students. In keeping with this recommendation, Salm et al. (2010) conducted a qualitative study where seven cohorts of pre-service professionals from faculties of Education, Nursing, Justice Studies, Kinesiology and Health Studies, and Social Work at the University of Regina, in Saskatchewan Canada, participated in a fourteen-week interprofessional practicum in elementary schools (Salm et al., 2010). The main goal of this project was to understand how an interprofessional practicum for pre-service professionals might alleviate professional silos by exploring how they learned with, from, and about each other's professions (Salm et al., 2010). In addition, the project also examined how the pre-service professionals perceived the impact IPC had on the quality of care for children and youth
with special needs. The pre-service professionals reported through weekly seminars, journals, field notes, and interviews that the practicum was valuable because it deepened their appreciation for the roles that other professionals play alongside their own profession in assisting CSHCN students (Salm et al., 2010). Salm et al. (2010) found that an interprofessional practicum provided pre-service professionals with a forum to learn collaborative skills, including problem solving and conflict resolution. Despite these benefits, a key finding within the school-based practicum included feelings of alienation among students, owing to the longstanding influence of traditional professional training focused on creating autonomous specialists (Salm et al., 2010). Unlike the United Kingdom, which focused on addressing collaboration between practicing professionals, the advantage of training pre-service professionals is that it provides the opportunity for a systemic change to occur, as these pre-service professionals will take this knowledge and experience with them as they start their careers.

**Recommendations for Schools**

Based on the medical complexity faced by students with CHSCN a common, agreed-upon set of best practices for IPC, focusing on the student/patient at the center, must be developed. This information, along with the successful examples of IPC in practice, may be used to inform recommendations about how interprofessional collaboration may be improved within the educational sphere. These recommendations relate to the improved sharing of information, the creation of a new care/information provision coordinator role, post-secondary curriculum changes, and policy changes.

**Improved sharing of information.** One recommendation that could improve the efficiency and effectiveness of interprofessional collaboration relates to sharing of information about CSHCN between all stakeholders involved in their healthcare and education. For example, in the medical field, patients have records and charts kept by medical and allied health professionals (e.g., Electronic Medical Records [EMR]). Upon referral, these records are shared so that the relevant information travels with the patient and reduces duplication. However, it is often up to the patient’s family to ensure that this transfer...
of records takes place when the child visits different specialists. There are currently few care coordinators to assist or to take responsibility for this task. In addition, this type of formal sharing of up-to-date records or charts does not currently take place in schools, which means that not all of the professionals working with a student have access to the same information. Issues of doctor–patient confidentiality, among others, often preclude the sharing of records and charts between medical and educational professionals (Cunningham & Wodrich, 2006). Additionally, within Canada and the United States, freedom of information and privacy protection Acts legislate what information can be shared and with whom. These Acts specifically forbid the disclosure of personal information as an unjustified invasion of personal privacy when the personal information relates to a medical, psychiatric or psychological history, diagnosis, condition, treatment, or evaluation (Government of Canada, 2015; Government of Ontario, 2014; U.S. Department of State, 2014). They also indicate that these provisions apply to educational history. Therefore, the only way that information can be shared between medical and educational professionals is through the parents.

Currently, the best solution is for parents of CSHCN to act as intermediaries between health and education professionals in order for relevant information to be transferred according to current confidentiality rules and practices (Cunningham & Wodrich, 2006; Obeng & James, 2010). This can create additional stress on parents of CSHCN, because they already have to fill the additional role of advocate in both the health and education spheres. A simple template, like the MyHealth Passport developed by The Hospital for Sick Children in Toronto, could be provided to parents of CSHCN to share with school personnel as required (The Hospital For Sick Children, 2012). This new template would include amendments to address pertinent educational information. Along with any specific medical information that the parents of CSHCN deemed appropriate to share with educators, this tool would include information about the student's educational exceptionalities (if any), program modifications and accommodations, and relevant psychoeducational assessment data. Further, student strengths and needs as they relate to the medical element will
be reflected, along with any health supports that the student needs or receives throughout the school day (e.g., medications, catheterization, etc.).

Despite the fact that this tool may be an effective solution for the sharing of medical information and the promotion of IPC, there are inherent difficulties that must be overcome. For instance, the question of how much medical information teachers actually need about the student (e.g., listing all medication side effects or solely the learning-related ones) arises. Second, for CSHCN students, health conditions are often complex and vary daily. This variance would also need to be reflected in this tool. Additionally issues regarding the transfer of information between health and education require attention. For example, how much educational information would be relevant and useful to medical practitioners would need to be determined. Further study into the applications and functionality of a patient-owned/parent-owned tool to promote IPC and information sharing between health and educational professionals is recommended.

While educators and medical professionals may be unable to communicate about the student’s needs, parents may choose to share any relevant information. The hypothetical tool described above would simply facilitate the sharing of information. Since the parents, in conjunction with the CSHCN, as appropriate, are responsible for maintaining and sharing the document, there is no contravention of the Freedom of Information and Protection of Privacy Act. Nevertheless, the lack of formal, coordinated information sharing ties in with the second recommendation, made below.

Care/information provision coordinators. It is well documented in the literature (e.g., Canter & Roberts, 2012; Cunningham & Wodrich, 2006; Harris, 2009; McClanahan & Weismuller, 2015) that having a single professional coordinate collaboration among the various education, health, and allied health professionals is the best way forward in terms of assisting students with complex health needs. In fact, Harris (2009) identified the need for effective liaison consultants. The role of the liaison consultant is to coordinate care and access to information. In addition to being informed about the child’s particular needs, this professional would be responsible for ensuring that all relevant information is communicated to all of the
stakeholders involved in the CSHCN’s health and education (home, school, and hospital/medical realm) (Canter & Roberts, 2012).

Professionals in psychology and education have proposed that school psychologists might be the best professionals to fill this role (Cunningham & Wodrich, 2006; Margison & Shore, 2009). Currently 13 to 18% of children are reported to have special needs (Cohen et al., 2011; Shaw & McCabe, 2008). Additionally, 1 in 1000 children from three months to 18 years of age are estimated to be dependent on medical technology and skilled nursing care (Lipper, Farr, Marchese, Palfrey, & Darby, 1997). In order for psychologists to be able to act as coordinators for CSHCN, there would have to be a significant increase in the number of psychologists employed by school systems, since their current case loads are heavy and they may not be able to play this role in schools with high numbers of CSHCN. There would also have to be additional training provided, since healthcare/educational coordination is a complex field that currently exists outside of the realm of psychology.

An alternative suggestion would be to have medical professionals, such as nurse practitioners, available in the schools to act as liaisons between CSHCN, families, educators, and physicians. Nurse practitioners work across multiple systems, including healthcare and education, and are well positioned to provide care coordination in a variety of pediatric settings and in schools (McClanahan & Weismuller, 2015). Regardless of supply and demand issues, having a professional coordinate the transfer of information to all interprofessional collaborators, as well as act as an advocate for the student, would decrease the need for families of students with medical complexity to play an intermediary role, which would likely help to decrease their stress levels.

Pre-service training. Finally, changing the curriculum requirements for pre-service professional programs (e.g., education, social work, medical and allied health professions, etc.) to include an interprofessional component could have a significant impact on future interprofessional collaborations in the care of CSHCN. Research suggests (e.g., Kitts et al., 2011; Madan-Swain et al., 2004; Robinson & Summers, 2012; Salm et al., 2010) that fostering an inter-disciplinary or interprofessional framework for collaboration is beneficial to both
the patient/student and the professional, since it allows for a forum for communicating and sharing pertinent information amongst disciplines. By including training on how best to collaborate and communicate effectively within interprofessional teams in their education and training, young professionals will begin their careers with an appreciation of the benefits of conferring with others in varying roles and capacities. Change is a slow process and many of the problems that currently exist with interprofessional collaboration may arise from professionals not having learned how to work effectively within these teams. Changing the academic curriculum of the next generation of professionals who will work with students with complex medical needs could help to initiate real systemic change in the long term.

Certain medical and nursing programs have already begun implementing an interprofessional education (IPE). The interprofessional practicum at the University of Regina is but one example. Others include the Caring for Kids Where They Live approach to pediatric clinical nursing education at a Western Canadian university (Ogenchuk, Spurr, & Bally, 2014), as well as a program using IPE to improve and promote patient safety at Memorial University in Eastern Canada (Kearney et al., 2010). Interprofessionalism is not only a pre-service learning objective; it is increasingly being taught at in-service nursing trainings as well (Russell, Nyhof-Young, Abosh, & Robinson, 2006).

IPE occurs when students from more than one profession learn with, from, and about each other in order to improve and enable collaboration, health outcomes, and quality of care (Ogenchuk et al., 2014). It is a growing trend in healthcare education, notably in Canadian curriculums (Kearney et al., 2010; Ogenchuk et al., 2014; Russell et al., 2006). Despite the strong push for IPE, questions arise about when it is best implemented in a professional’s learning process. Russell et al. (2006) argue that professionals need their own disciplinary identity before they can undertake interdisciplinary work, because to best collaborate with others, it is important for professionals to be well grounded in their own specific discipline. Conversely, Russell et al. (2006) also state that early unidisciplinary socialization leads to the development of professional siloes that have the potential to become barriers to IPC. Timing the introduction
of IPE into post-secondary curriculums is a difficult consideration that has significant impacts on the future professional practices of professionals.

Another consideration involves the implications of collaborative work on a culture of safety in the workplace. According to the Health Council of Canada (2009), there is growing evidence that when healthcare professionals effectively communicate and collaborate, the quality of patient care increases. This begins with educating students of health professional programs about concepts like the importance of working well on interprofessional teams (Kearney et al., 2010). It would follow that if these positive changes occur in healthcare settings, they would be likely to occur in educational settings as well.

Conclusions and Future Work

Interprofessional collaboration already takes place, to some extent and with some degree of effectiveness, in both the health and education sectors. As a result, examples of collaboration and multidisciplinarity can be found in existing literature and can be adapted to the context of accommodating students with special healthcare needs into the existing education structures. The increased survival rate of children with medical complexity and a shift from hospital-based schools to the integration of CSHCN into regular classes has resulted in the need for changes to the ways that school boards and governments provide educational support. Interprofessional collaboration and communication are important factors in promoting the overall health and well being of the student, but may also serve to minimize stress on all stakeholders involved in the student’s healthcare and education. While barriers currently exist within interprofessional approaches, there are examples of its successful implementation into practice. The question to be addressed moving forward is how best to improve this form of collaboration so that all stakeholders get appropriate access to information and resources to best support the changing needs of CSHCN.
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