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Academic Continuity and School Reentry Support as a Standard of Care in Pediatric Oncology

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Clinicians agree that return to school after diagnosis promotes the positive adjustment of children and adolescents with cancer; however, the school reentry process can present challenges. The aim of this review was to critically evaluate the literature on school reentry support for youth with cancer. Seventeen publications were identified. School reentry services were well-received by families and educators; increased teacher and peer knowledge about childhood cancer; influenced peer and educator attitudes toward the patient; and improved communication and collaboration between patients/families, school, and the healthcare team. Evidence supports a strong recommendation for school reentry support for youth with cancer. Pediatr Blood Cancer 2015;62:S805–S817. © 2015 Wiley Periodicals, Inc.

Key words: childhood cancer; psychosocial; school reentry

INTRODUCTION

Children and adolescents diagnosed with cancer are frequently absent from school because of treatment and treatment-related side effects.[1,2] Absences can be a problem both during and after treatment but are most pronounced in the year after diagnosis.[1] Although empirical support is limited, clinicians agree that a return to the student's community school can facilitate a sense of normalcy, improve health-related quality-of life, and promote positive adjustment, academic progress, and socialization of the child or adolescent with cancer.[3,4]

"School reentry" refers to the process of returning to school after diagnosis and/or treatment for cancer[5] and can present challenges for the healthcare team, patients, classmates, parents, and teachers. Healthcare teams report being unsure how to help parents navigate the school system.[5] Patients may worry about their physical appearance or fear that they would not be able to keep up with activities, while peers may have concerns about catching the disease.[1,3,6] Some parents report concerns about safety and teasing; they are unclear about their role in school reentry[1,3,6] and feel that their children are not receiving all the school services needed.[5] Upon reentry, some parents report that schools are unsupportive toward their child's special needs or, alternatively, are

Psychosocial Standard of Care

- In collaboration with parents, school-aged youth diagnosed with cancer should receive school reentry support that focuses on providing information to school personnel about the patient's diagnosis, treatment, and implications for the school environment and provides recommendations to support the child's school experience.
- Pediatric oncology programs should identify a team member with the requisite knowledge and skills who will coordinate communication between the patient/family, school, and the health care team.

Abbreviations: BASC-2, behavioral assessment system for children second edition; QoL, Quality-of-life

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Conflict of interest: Author MKI is the current Present of APHOES and author ME is Committee Chair of the APHOES Legislative Committee. ME is also the Vice President of the Division of Physical, Health, and Multiple Disabilities within the Council for Exceptional Children. While their participation in this standard development was critical (given their content expertise), lead authors ALT and RBN took care to reduce any possible bias by strict adherence to evidence based review, wording and GRADE assessment for each standard. MKI and ME participated in review of literature, developing standards and in preparing final manuscript; however, the entire writing team shaped and approved final working of each standard statement such that individual authors could not exert independent influence on how each was worded. Additionally, MKI and ME did not participate in the external reviews conducted by other members of their respective organizations. Communication about these reviews occurred between organization contact and authors RBN and ALT exclusively.

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overly accommodating of the student.[7,8] Despite these concerns, data from teachers and peers suggests that the majority of children return to school and fit in well with their peers.[9]

Given the rarity of childhood cancer, it is not surprising that educators report having little or no training or experience in working with children with cancer.[5,10] As a result, teachers worry about their lack of knowledge about cancer and how other children in the classroom will adjust.[1,3,6] They may feel unprepared to support the educational needs of students with a chronic condition such as cancer.[11,12] Educators desire training and have reported that if they received specific guidance on how to help patients returning to school, they would be more consistent, patient, understanding, and involved in providing support to these students.[7,13]

The Association of Pediatric Hematology Oncology Educational Specialists (APHOES) and the International Society of Paediatric Oncology (SIOP) recommend that school support for students with cancer begin at diagnosis, that school reentry programs be offered, and that clear communication between school and hospital personnel be ongoing.[14,15] Despite these recommendations, an evidence-based standard of care has not yet been established. There are a wide range of school support programs and approaches (e.g., reentry programs, hospital-based schools, homebound instruction, use of videoconferencing technologies) that are designed to mitigate the impact of childhood cancer on the school experience. As most have not been studied systematically in pediatric cancer, this review focuses specifically on school reentry support for school-age youth (ages 4–18) who are returning to a community school after initial diagnosis and treatment for a malignancy. Recommendations for school reentry described here are predicated on the assumption that children with cancer will return to school in the community as soon as they are medically able, although there is considerable variability between individual providers (i.e., pediatric oncologists) and across oncology programs regarding what constitutes a "timely" return to school.[16] In addition, return to school is dependent upon family comfort, which is also quite variable.

METHODS

To develop this standard, we used methods described by Wiener et al.[17] in this special issue for the Standards for Psychosocial Care of Children with Cancer and Their Families project. Our search employed four databases: PubMed, PsychInfo, CINAHL, and ERIC. Search criteria included English-language, peer-reviewed literature published from March 1, 1995 to March 1, 2015, with participants ages of 4–18 and a history of any malignancy. Exclusion criteria eliminated literature that was not empirical research (with the exception of consensus statements from expert panels) and literature about non-cancer diagnoses, patients over age 18, and foreign language publications. Articles were retained that included children with cancer as one disease group among other illnesses. Specific search terms included "school reentry," "school reintegration," "school intervention," "school liaison," OR "schools" AND cancer-related terms AND "child" OR "adolescent" OR "pediatric" OR "paediatric" OR "youth" OR "children" (using indexed MeSH terms). Searches were supplemented with a manual review of the reference lists of included studies and ultimately resulted in a total of 529 citations. Authors followed PRISMA guidelines, leaving 17 articles for inclusion in the synthesis of evidence (Figure 1 in Supplemental Materials).

The study team was comprised of representatives from the fields of psychiatry, psychology, nursing, and education. External reviews were conducted by members of APHOES and the Council for Exceptional Children's Division of Physical, Health, and Multiple Disabilities, an attorney at an Education Law Center, a school administrator, and parents and survivors of childhood cancer.

RESULTS

The search strategy identified 17 peer-reviewed papers, including two meta-analyses and one systematic review of the literature. This literature is summarized in Table I in Supplemental materials. Previous seminal work on school reentry that preceded the selected search timeframe was captured and synthesized in the meta-analyses included in this review.[18,19] Studies indicated that school reentry efforts, in their various formats, were well-received, well-accepted, and deemed helpful by parents and educators.[10,20,21] In general, school reentry programs and approaches varied widely across studies but commonly targeted parents, school personnel, or the patient's classmates, rather than the patients themselves. Programs typically included written, electronic, or in-person communication about diagnosis and treatment, its impact on the school experience, and suggested services of accommodations. For more detailed description of school reentry services in the reviewed studies, please refer to Supplemental Materials, Table II.

Across nine publications, including two meta-analyses,[18,19] one systematic review,[1] two individual quantitative studies,[10,22] and four qualitative studies,[6,23–25] findings consistently indicated that school reentry programs increased educators' knowledge about the medical and psychosocial aspects of cancer, led to more positive teacher attitudes toward the child with cancer, and increased teachers' confidence and comfort levels managing issues encountered by patients with cancer who are returning to school. Of note, one study[6] reported that increased knowledge about pediatric cancer might inadvertently increase worry and concern by teachers regarding side effects and academic achievement (although it should be noted that increased levels of worry, when appropriately directed, might result in more effective school support for the child with cancer). Additionally, two studies found that educators' increased knowledge about diagnosis and treatment improved their ability to provide more comprehensive educational programming suited to students' specific needs.[23,25]

Similarly, four studies, including two meta-analyses,[18,19] a systematic review,[1] and an individual qualitative study,[24] indicated that school reentry programs increased peers' knowledge concerning the medical and psychosocial aspects of cancer and improved peers' attitudes toward and increased interest in interacting with the student with cancer. In a meta-analysis of six intervention studies, increased knowledge among classmates was found to be associated with less fear of and a more positive attitude toward the child with cancer.[18]

Evidence for the impact of school reentry support on the patient is limited, and findings are less consistent than research assessing the impact on school personnel and peers. Helms et al.[18] reported that school reentry support both enhanced the academic achievement of and lowered levels of depression in students with cancer. In small qualitative studies, parents reported decreased peer teasing[6] and improvement in their child's social adjustment and learning.[23] Additionally, a quality improvement study of a school liaison program for pediatric cancer survivors reported that those in the program were more likely to be receiving special education services,[20] which may indicate increased access to noteworthy school supports. In a feasibility

TABLE I. School Reentry Standard Summary of Evidence Table

Standard	Evidence summary[1]	Methodology[2]	Quality of evidence[3]	Strength of recommendation[4]
a. In collaboration with parents, school-age youth diagnosed with cancer should receive school reentry support that focuses on providing information to school personnel about the patient's diagnosis, treatment, and implications for the school environment and provides recommendations to support the child's school experience b. Pediatric oncology programs should identify a team member with the requisite knowledge and skills who will coordinate communication between the patient/family, school, and the health care team	School reentry programs and services were well-liked and appreciated by patients, families, and educators; increased teacher and peer knowledge about childhood cancer; influenced peer and educator attitudes toward the patient returning to the classroom; and required significant communication and collaboration between patients/families, school, and the health care team Existing studies had methodological and conceptual weaknesses, including small sample sizes, lack of control groups, lack of randomized controlled trials, and lack of follow-up data regarding effectiveness and impact on patient's adjustment	Pre-post test designs, qualitative, quantitative, meta analyses, and a systematic literature review. No randomized controlled trials. Consistent findings evident	Low quality given consistent findings from lower level evidence studies	Strong recommendation given risk-benefit ratio (i.e., minimal risk to patients, families and educators and potential benefits of improving the child's teachers' and classmates' understanding of the illness and opinions about the child with cancer)

[1] Based on summary of evidence table for that standard; [2] Types of studies: e.g. RCT, cross-sectional, longitudinal; consensus; systematic review articles; [3] Quality of evidence: High, moderate, low, and very low; [4] Strength of recommendation: Strong or weak (based on GRADE quality criteria).

study of a 4-month reentry intervention, parent-report on the Behavioral Assessment System for Children (BASC-2) were normal at pre- and post-testing, but quality-of-life (QoL) decreased over the course of the study;[26] this finding, however, may be due to expected decrements in QoL over the first months of treatment.

Evidence about the impact of school reentry support on parents was also very limited. Three separate qualitative studies reported that school reentry support may strengthen parents' advocacy skills for their child in the school setting[23] and decrease parent concerns related to peer teasing[6] but have no impact on parent concerns regarding their child's safety.[6] Communication and close collaboration among medical staff, school personnel, and families was identified as a critical component of providing effective services to students.[5,7,21,27,28] Stakeholders reported that educators need to keep in touch with children as they recover, that parents and teachers must work together to facilitate a smooth transition back to school, and that support from teachers, tutors, and the hospital staff was instrumental in creating a positive school re-entry experience.[27,28] To support collaboration and address communication challenges, several reviewed studies suggest a designated team member (e.g., NP, school liaison) may be helpful.[5,15,20,23]

DISCUSSION

Our review suggests that school reentry support should be provided to youth diagnosed with cancer by a well-trained, experienced pediatric oncology team member who will coordinate communication between the child/family, school, and health care team and should, at a minimum, focus on providing information to school personnel about the impact of disease and treatment on the school experience. Support may include verbal/written communication with the school, an individualized academic plan, guidance for parents around resources and processes, a school visit to educate peers and school personnel, educator workshops, or formal school liaisons. Two studies documented a positive impact of comprehensive school liaison programs,[20,23] and while these results are promising, further study must be conducted before recommendations can be made about this specific model of support. If resources are available, the use of a hospital-school liaison with expertise in both education and medical systems may help to bridge the gap in communication and increase coordination of efforts across systems and stakeholders.[29]

Methodological and conceptual weaknesses of the current evidence base limit the ability to draw strong conclusions about the impact or effectiveness of school reentry support. In general, studies were rated as low to very low quality evidence because of small sample sizes, lack of control groups, and the lack of randomized clinical trials or between-site comparison trials. Outcomes measures were psychometrically limited and focused on peer knowledge or satisfaction of teachers and/or parents, with little work examining metrics such as numbers of children on 504 plans or Individualized Education Programs (IEPs). Neither study methods nor reentry approaches were informed by a clear theoretical basis or model; as a result, goals and outcomes of school reentry have been unclear to date. There were no standardized approaches to school reentry support (Supplemental Materials, Table II). Programs varied by content, who conducted the program, and to whom the interventions were directed. Finally, there is lack of evidence for improved social or academic outcomes when children receive school reentry services.

Although decisions regarding return to school are dependent on pediatric oncologists and the comfort of caregivers, there is agreement among parents, health care team members, and professional/advocacy organizations (e.g., APHOES, SIOP) that children with cancer can benefit from strategic support to facilitate school reentry.[15,30] Additional research, however, is needed to direct best practice. Future research should address optimal timing and necessary components of support; impact of school reentry support on social or academic outcomes for children with cancer; potential negative effects or unintended consequences on patients and peers; and best practices for providing ongoing educational assessment and support for students with cancer beyond the return to school after diagnosis.

Current research focuses primarily on younger school-age children; research on best practices for students in middle and high-school, when there are unique academic challenges and complexities (e.g., more classes, teachers, and independence), was very limited. Evaluating which components of support are most beneficial to patients will aid in determining allocation of limited financial and personnel resources at childhood cancer centers across the country. Specific focus should be given to patients with brain tumors, who are at risk for significant academic,[31] and social difficulties[32,33] and therefore may require more intensive support in school and interventions that are different in scope, timing, and content than those that may be beneficial for patients with other diagnoses. Research noting social isolation, victimization, and low social acceptance of children surviving brain tumors[32,33] highlights the need for school reentry or liaison programs to mitigate poor outcomes for this vulnerable population.

The most significant organizational barrier to implementation of this standard is cost of programming and personnel. Institutional resources often limit availability of personnel dedicated to school support, as programming is non-revenue generating and thus may be perceived as cost-prohibitive.[34] Another barrier to implementation is large patient volumes and/or centers with large catchment areas that span multiple states and many school districts[3] which may present logistical challenges at the organizational level. Developing procedures and materials to educate school personnel from a distance (i.e., through written, telephone, or electronic communication) may prove helpful in addressing these barriers, but current research in this area is non-existent.

Overall, the current evidence regarding the value of school reentry programs is of low quality based on our assessment of the scientific rigor of the reviewed studies. Findings across studies, however, consistently demonstrated positive endorsement of school reentry programs by parent and education stakeholders and improvements in teacher and classmate understanding of the illness and opinions about the child with cancer. Given these consistently reported benefits of school reentry support, the minimal risk this support poses to the child with cancer, their family, their classmates and school personnel, and the potential harm to the patient in not providing this support, we strongly recommend that children with cancer be provided with school reentry support after diagnosis by a member of the childhood cancer care team (Supplemental Table I). Currently, there is a notable lack of evidence to endorse the essential elements of school reentry support, including the optimal type and timing of interventions and the necessary expertise or qualifications of personnel implementing the interventions and coordinating support.

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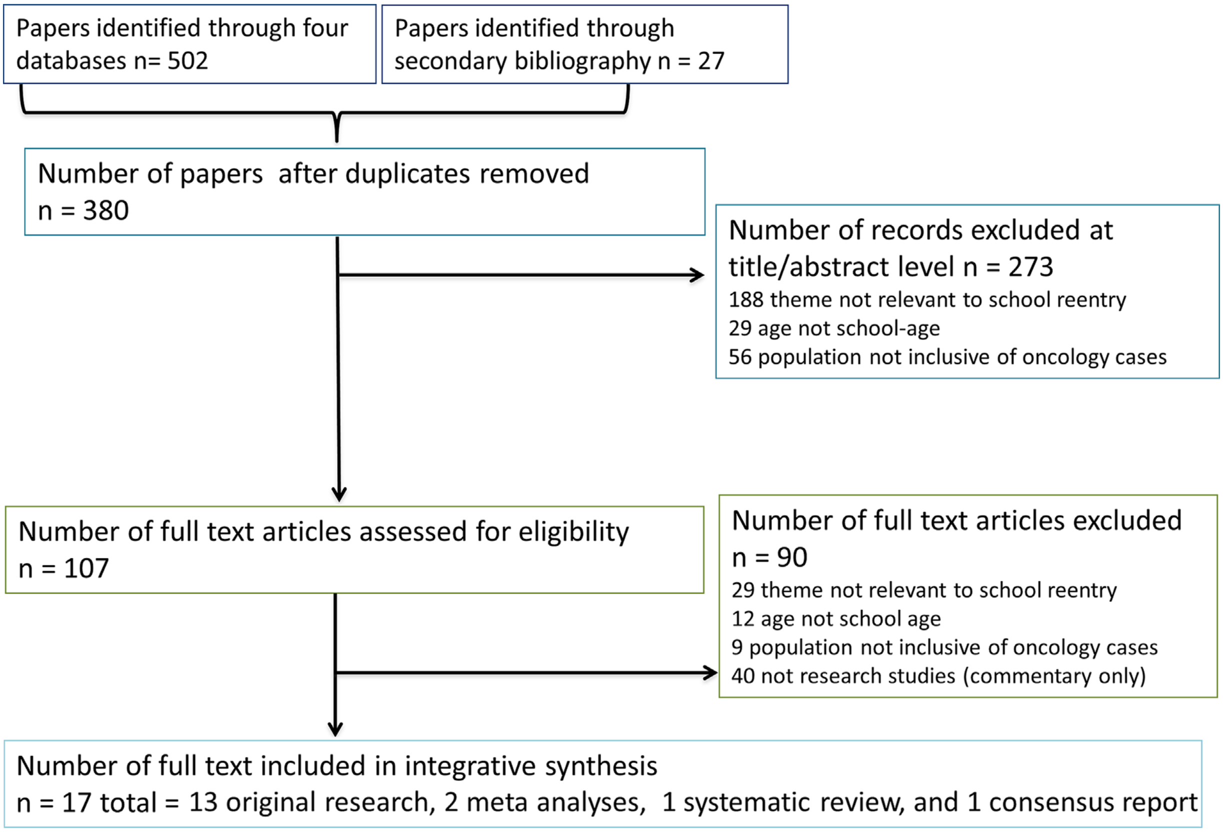
SUPPLEMENTARY INFORMATION

SUPPLEMENTAL FIGURE 1. PRISMA Table: Preferred Reporting for Systematic Reviews and Meta-Analyses



SUPPLEMENTAL TABLE I. School Reentry Support Standard Evidence Table.

Study	Design	Sample	Findings	Study rigor	Level of evidence
Annett & Erickson (2009). [1]	Quasi-experimental feasibility study of 4 month school reintegration intervention; within subjects (pre-post measures)	8 families of children, aged 6-12 years old, with ALL	Families preferred clinic-based intervention. BASC-2 was normal pre and post. PedsQoL decreased during the study. Parents had positive opinions about the importance of schools being responsive to a child's educational needs during therapy	Very small sample, attrition at post- time points; no control group; difficult recruitment with families receiving between 3 and 8 of intervention models	3
Bruce, Newcombe, & Chapman (2012). [2]	Individual qualitative study of a pilot school liaison program for children with brain tumors	9 families (patient with brain tumor, age 5-18yrs) and parents, teachers and health staff	Children were able to learn to their ability rather than be judged on the achievements of their respective grade levels Parents reported that the program strengthened their advocacy skills and improved child's social and learning achievements Teachers reported an improved ability to provide more comprehensive educational programming suited to the child's needs Most children achieved or exceeded their initial academic, social, and behavioral expectations	Research question somewhat vague; qualitative approach reasonable, study context described, method of data described; analysis appropriate for the question; analysis conducted by only one person	6
Canter & Roberts (2012). [3]	Meta-analysis of interventions to facilitate school reentry for children with chronic illness	12 of 1,617 eligible studies met all inclusion criteria (9 studies were childhood cancer); n=176 ill children, 494 healthy classmates, and 443 school personnel	Results of this quantitative review provide support for the effectiveness of school reentry programs in terms of increasing specific knowledge and enhancing positive attitudinal change. Larger effects were found for interventions targeting teachers than those targeting healthy peers for both increases in knowledge and positive attitudinal change.	Important relevant papers included; important outcomes considered; appropriately assessed for quality of studies	5
Dubowy, Rieger, Songer, Kleinmann, Lewandowski, Rogers, & Silber (2006). [4]	Quasi-experimental feasibility study of web based training program regarding childhood cancer; Within subjects (pre- and post-test) design	41 teachers recruited from local public school districts	Teachers' knowledge of childhood cancer increased following the 6 module training Teachers' ability to apply their knowledge to a case study improved on post-test. Teachers found this to be an acceptable training program and rated it positively.	Relatively small, but reasonable sample size; no control group; correct analyses	3
Georgiadi & Kourkoutas (2010). [5]	Individual qualitative study; single case	One child, age 11, with leukemia	Reintegration program increased teachers, peers, and parents' knowledge concerning the medical and psychosocial aspects of cancer Improvement of teachers and peers' attitudes toward the child was observed	Research question not clearly stated; study context not clearly described; role of researcher not clearly described; analyses not described	6
Helms, Schmiegelow, Johansen, Thorsteinsson, Simovska, & Larsen (2014). [6]	Meta-analysis of intervention studies	6 studies identified using PRISMA method, studies of children with cancer with at least 10 participants	Significant effects of school re-entry programs for enhancing academic achievement in children with cancer ($p = .008$) and lowering level of depression ($p = .05$). Increased knowledge among classmates was associated with less fear and a more positive attitude toward the child with cancer	Right types of papers included, assessed for quality, important outcomes considered; studies included did not all include control groups; appropriately assessed for quality of studies	5

(*Continued*)

SUPPLEMENTAL TABLE I. (*Continued*)

Study	Design	Sample	Findings	Study rigor	Level of evidence
Larcombe & Charlton (1996). [7]	Quasi-experimental study; within subjects, pre- post-test design evaluating study days for teachers focused on children returning to school after treatment for cancer	233 school staff	Teachers showed significant gains in knowledge about childhood cancers and in confidence concerning the management of typical problem situations that might be encountered by children with cancer returning to school Recommendations were made to 20 regional treatment hospitals in the UK to organize similar study days for teachers on a regular basis	Sufficient sample size but large attrition pre to post-test (i.e., only 35% of questionnaires were matched and analyzed); no control group; correct analyses	3
Masera, Jankovic, Deasy-Spinetta, Adamoli, Ben Arush, et al. (1995). [8]	The 2nd official document of the SIOP Working Committee on Psychosocial Issues in Pediatric Oncology - specific to topic of "School/ Education"	N/A	Children with cancer are not only entitled to attend school, but need it for full recovery School in the hospital should be a minimum expectation for all children with cancer; the child's education program from his/her school of origin should be followed, when possible School reentry programs are recommended for treatment facilities School personnel should be trained on the child's diagnosis + recommendation for support; a manual should be prepared to train teachers Children with cancer should have a personalized education program that is intentionally designed and tailored to their specific needs	Not a research study; rather, this document represents general consensus/ opinions of respected authorities/expert committees	7
McCarthy, Williams, & Plumer (1998). [9]	Individual descriptive qualitative study of school reentry nursing intervention	10 children aged 5-13; 10 parents; 10 teachers	Parent: decreased concerns related to peer teasing, no change in concerns regarding safety. Teacher: increased knowledge, greater worry regarding achievement and side effects. Kids: decreased peer teasing, continued concern regarding keeping up.	Research questions clearly stated; qualitative approach justified; study context described; methods of data collection and analysis described	6
McLoone, Wakefield, Butow, Fleming, & Cohn (2011). [10]	Individual qualitative study of returning to school after cancer	19 adolescent survivors (mean age 16.2); 21 mothers, 15 fathers, and 15 siblings from 22 families	Barriers to successful school reentry included symptoms of fatigue, anxiety, and poor communication between families and the school. Support from friends, teachers, tutors, and the hospital outreach nurse was seen as instrumental in creating a positive school re-entry experience. Majority of participants reported that support from the school counselor was minimal.	Qualitative approach justified; research questions clearly stated; study context described; methods of data collection and analysis described	6

(*Continued*)

SUPPLEMENTAL TABLE I. *(Continued)*

Study	Design	Sample	Findings	Study rigor	Level of evidence
Moore, Kaffenberger, Goldberg, Oh, & Hudspeth (2009). [11]	Individual descriptive study of nurses, school personnel, and parents' perceptions of school reentry	118 nurses, 49 school personnel, 59 parents of children diagnosed between the ages of 3 and 19	Nurses and school personnel reported performing few services to facilitate school reentry even though both groups rated their services as moderately helpful. Both groups identified additional activities that would have been helpful. School attendance was significantly lower after diagnosis and therapy. Communication was a major barrier to providing effective services to students. Nurses were unsure how to help parents navigate the school bureaucracy. School personnel wanted more information. Parents felt their children were not receiving the services needed Individuals recommended that a liaison position be created to coordinate services.	Sample size of nurses sufficient; more limited sample size of teachers; sampling methods used; no control group; correct analyses used	6
Northman, Ross, Morris, & Tarquini (2014). [12]	Individual descriptive QI project evaluating quality and effectiveness of a school liaison program (SLP) for pediatric cancer survivors at a single institution	57 families of children diagnosed primarily with CNS tumors or leukemia.	Following SLP program involvement, survivors much more likely to be receiving special education support in school. SLP clinicians provided phone consultation and attendance at school meetings for 90% of respondents, 50% reported their SLP clinician attended a testing feedback session. Parent-reported quality and efficacy of SLP services strongly positive. Parents attributed SLP involvement to improved academic performance, home-school communication, and school-level understanding of student needs.	Low response rate (57/130); Sample may not be representative; no control group; correct analyses used.	4
Papadatou, Metallinou, Hatzichristou, & Pavlidi (2002). [13]	Individual descriptive, survey study of Greek teachers' perceptions of school reintegration for students with chronic and life-limiting conditions	1,792 educators	Educators reported avoiding discussing the illness experience with the child and classmates, becoming more lenient in their grading, less expectant of high academic performance, and more supportive of the ill child. Educators requested training, closer cooperation with professionals, and ongoing support to effectively manage the experience of a serious illness in their classroom.	Sufficient sample deemed 'representative sample of educators'; low 52% response rate to survey request; correct analyses used.	6
Rynard, Chambers, Klinck, Gray (1998). [14]	Descriptive review of school support programs for chronically ill children and individual descriptive, consumer-based program evaluation of a school support program	67 children, ages 5-19yrs; 56% receiving treatment, 44% off treatment	As per consumer satisfaction measures by parents and teachers, both groups of stakeholders perceived the components of the School Support Program as helpful. Importance of communication of information to school was viewed as very important.	Moderate sample size; moderate response rate; no control group; correct analyses used.	6

(Continued)

SUPPLEMENTAL TABLE I. *(Continued)*

Study	Design	Sample	Findings	Study rigor	Level of evidence
Sullivan, Fulme, & Zigmond (2001). [15]	Individual qualitative study of perspectives of young survivors and their parents	8 children, ages 10-12, who had been diagnosed with ALL ages 5-7 and 10 parents	Coded interviews to derive themes/ guidelines: Educators need to keep in touch with children as they recover. Parents and teachers need to work together to ensure smooth transition back to school. Parents' attitudes affected early return to school. Parents are more concerned about academic rather than social and developmental aspects of school re-entry.	Small sample size, selective reporting and analyses. No blinding, 92.5% thematic agreement	6
Thies & McAllister (2001). [16]	Individual descriptive study of a 2 day workshop focused on improving schools' ability to educate children with chronic illness.	33 school principals from 9 districts. Teams from their schools also present, including counselors, school nurses, teachers and sometimes parents.	Principals rated that their awareness of the effects of chronic illness on learning increased (40%). They improved procedures (46%). Better at involving parents in developing 504 plans (73%). During follow up visits, schools noted increased compliance to 504 plans.	Research question not clearly stated; data collection and analyses not cleared described; possible selective reporting	6
Vance & Eiser (2002). [17]	Systematic literature review of studies examining the effects of school re-entry on children with cancer (age 5-18) in all stages of cancer treatment	42 papers total retained	School absences are higher for children with cancer than healthy children and those with other chronic conditions. Classmates may benefit from short intervention sessions, discussing issues are how cancer is caused and treated. Teacher-focused interventions reported increased knowledge of childhood cancer and confidence in dealing with the child.	Right papers; relevant papers included; important outcomes considered; appropriately assessed quality of studies	5

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SUPPLEMENTAL TABLE II. School Reentry Program Descriptions

Study	School reentry program details	Implemented by	Intervention target
Annett, R.D. & Erickson, S.J. (2009). [1]	Meetings with the parents and teacher to provide information about treatment and school challenges anticipated; follow-up consultations to the child, family (twice/month), and classroom teacher (twice/month) covering 8 advocacy modules. Consultations included assistance with homebound, 504 planning, or special education/ pull-out help	"Family advocate" from a statewide advocacy organization. No credentials or professional discipline specified, but advocacy organization provided training to designated family advocates	Families and classroom teacher, separately
Bruce, Newcombe, & Chapman (2012). [2]	'School liaison program' included assessment of child and family strengths, resources, and educational needs; development of a plan to address support needed; established links and strengthened collaborations between health and education systems	School liaison. No credentials, professional discipline, or training specified	Parents and teaching staff
Dubowy, R.L., Rieger, B.P., Songer, N.S et al. (2006). [3]	Web-based program with six-training modules written by a multidisciplinary team. Topics included an overview of childhood cancer, brain anatomy, cognitive late effects and psychosocial aspects, strategies and accommodations, and special education	Computer	Teachers
Georgiadi, M & Kourkoutas, E.E. (2010). [4]	Support emphasized increased understanding of cancer, its treatment and medical and psychosocial side effects; included supportive counseling for the family and the child, educational presentations to school personnel, and systematic consultation between hospital and school	An interdisciplinary team consisting of psychologist, social worker, school counselor, special education, and nurse	Child, parents, peers, teacher
Larcombe, IJ & Charlton, A. (1996). [5]	"Study days for teachers". Presentations about medical facts about cancer; services in the hospital and importance of collaboration with the teacher; and findings from early study on problems of children returning to school after treatment for cancers. Afternoon workshops about teacher attitudes about cancer or specific situations that arise in school	Medical consultant, hospital teacher, social worker or 'liaison staff', and researcher	Teachers
McCarthy, A. M., Williams, J., & Plumer, C. (1998). [6]	School reentry visit: 30-60 minute meeting with 'school team' to review diagnosis, treatment, side effects, and related academic issues. Separate meeting with peers frequently occurred	Pediatric oncology nurse practitioner	School personnel (which many have included teachers, principal, school nurse, counselor, physical education teacher, and school aides) and classmates

(Continued)

SUPPLEMENTAL TABLE II. (*Continued*)

Study	School reentry program details	Implemented by	Intervention target
Northman, L., Ross, S., Morris, M., & Tarquini, S. (2014). [7]	School Liaison Program (SLP): initial consultation with parents and with school; psychoeducation to parents and schools through phone consultations, face-to-face visits, and participation in school meetings on cognitive late effects, state and federal disability law, how to obtain testing. SLP clinician attends testing feedback sessions and educates school team about recommendations; advocacy for appropriate educational supports and services; and ongoing consultation throughout a child's educational career	SLP clinicians. No credentials, professional discipline, or training specified	Parents and schools (broadly)
Rynard, D.W., Chambers, A., Klinck, A.M., Gray, J.D. (1998). [8]	Pediatric Cancer School Support Program of Southwestern Ontario: Written information provided to school; meeting held with program staff, school staff, peers and child to help school plan to accommodate the needs of the school community; updated information provided on a regular basis; and annual workshop for teachers, parents, and health professionals	Support team consisting of a program coordinator who works in consultation with the oncology team psychologist and oncology nurse clinician. Other hospital personnel (social worker, public health nurse, etc) participate as needed	School staff (broadly), peers, and child
Thies, K.M and McAllister, J.M. (2001). [9]	Health and Education Leadership Project (HELP) included two full day workshops/ training for principals, curriculum manual, and follow-up support by HELP team. Workshops include 10 modules (e.g., health and education integrations, family centered care, implications of chronic illness, educational law, tools and resources)	HELP management team, which consisted of parents, health professionals, and educators	Principals

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