Children with Behavioural/Mental Health Disorders and School Mental Health Nurses in Australia

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Abstract

Australian school nursing is an emergent field of practice. There have been no identified published papers discussing the potential role mental health nurses could take in a school nurse model in Australia. Children with behavioural/mental health disorders present challenges to schools, teachers and their families. They can be disruptive in class, inappropriate with their peers and perform poorly academically. Often this group of children do not respond to school's usual strategies to support appropriate behaviour. When children with behavioural/mental health disorders do not receive the appropriate specialised support their problems can escalate over time and in adolescence their behaviour may well become more challenging with increased aggression, substance use, contact with criminal justice system and school failure with or without dropout. Case management of children and adolescents with non-typical health needs by nurses in schools has been argued to be effective. There is not a lot of research to backup the claims for case management effectiveness in school when undertaken by any profession. Although there is a body of literature on the topic of case management, most of it supportive of it as a strategy based on the intuitive sense of it, the bulk of it consists of policy discussion and anecdotal evidence. There is a paucity of research on the topic. This paper argues that mental health nurses, working as case managers, could be effective in the support of children with behavioural/mental health disorders in schools. Mental health nurses because of their professional formation work not only with the individual child but include the family, the school, individual teachers and health and welfare services in their management of their clients with behavioural/mental health disorders. This orientation equips mental health

nurses well for a case management role in schools. Case management by nurses has been shown to be effective in supporting the complex needs of children with physical health problems. It is timely that case management of children with behavioural/mental health disorders by mental health nurses was rigorously evaluated.

Key Words

School, Case Management, Behaviour, Mental Health, Nurse

Introduction

The issue of children at risk because of challenging behaviours and mental health problems is important both nationally and internationally. This group of children, without support, have poor outcomes both academically and socially (Bradley, Doolittle et al. 2008; Hayling, Cook et al. 2008; Larmar 2008). In the short-term these problems are associated with disruption in school, aggression with peers, difficulties in establishing relationships, and stress at home. In the long-term the problems are associated with lower completion rates of high school, poor employment outcomes, difficulties with socialising and relationships, an in increase likelihood of involvement with criminal activities, increased substance abuse and mental health problems (Brame, Nagin et al. 2001; Larmar 2008). All of which can represent not only reduced quality of life for the individual and their families but also increased economic burden on society.

Schools attempt to support their students but an education focus and orientation to the neurotypical means that, for children with challenging behaviours and mental health problems, they're inappropriate behaviour can be seen as a discipline problem (Forness, Kavale et al. 1996; Grossman 2005). Unfortunately because of the nature of the problems children with behavioural/mental health disorders often don't respond to normal discipline and come to the attention of services later than any other group (Grossman 2005). That is; they are the oldest of any special needs group to come to the attention of agencies that can help them. This is despite demonstration of troubling behaviours at a very early age (Hayling, Cook et al. 2008). This later identification makes helping the child and their family more difficult (Malmgren and Meisel 2004).

Researchers examining single factors have found that risks rarely occur alone and more often tend to cluster (Gutman, Sameroff et al. 2003). Children often experience re-occurring stressors, or risks that occur in clusters that are multi-

systemic in nature. If left without intervention, the conditions worsen (Fraser, Richman et al. 1999; Gutman, Sameroff et al. 2003). In an analyses of multiple risk factors, it was found that a single environmental risk factor does not increase the probability of behavioural and mental health problems, but the presence of a constellation of risk, or the strength of the cumulating stressors that contribute to increased behaviour problems (Gutman, Sameroff et al. 2003).

Individual characteristics resulting from risk factors for children with behavioural and mental health problems exist in cognitive, social and communication domains and may be manifested in: non-compliant behaviours directed toward adults, aggressive behaviour with peers including teasing and bullying, and disruptive behaviours in classes. Emotional and mental health characteristics may include: impulsive behaviour, nervousness and anxiety, easily upset by demands of teachers and parents, inability to concentrate on tasks, and fearful of trying new tasks (Young 2003). Social characteristics include: inability to make and keep friends, difficulty in correctly interpreting social cues; verbally and physically aggressive behaviours with others. Communication characteristics include language deficits both expressive and receptive and social skills deficits (Young 2003).

Behaviour and social characteristics have also been found to increase risk for challenging behaviours and mental health problems. Children with behavioural/mental health disorders often have relationship problems and aggression, and of the children who are aggressive, those who demonstrate early onset physical aggression are more likely to demonstrate physical aggression during adolescence (Brame, Nagin et al. 2001). Children with behavioural/mental health disorders experience more rejection by peers, drug abuse, clinical depression, delinquency, and lower overall competency scores than students with other learning disabilities and non-disabled peers (Conroy and Brown 2004; Wagner, Kutash et al. 2005).

Children at risk require special attention and support from teachers and schools who are not equipped with the specialist assessment and therapeutic skills to support them (Grossman 2005). There is a growing body of research demonstrating the effectiveness of school-based interventions that reach beyond the classroom to families and peers (Hoagwood, Burns et al. 2001; Larmar 2008). This paper argues that an approach using mental health nurses as case managers in schools could be useful in helping these children, their families, and teachers. Further to this it is argued that any new and existing programmes need rigorous evaluation.

Case management in a school setting

To conduct a comprehensive review of the literature related to case management in schools the data bases CINAHL, Psychinfo , Medline, Pub Med and ERIC were searched using the terms case management and school, case manag* and school, case management and disability, case management and special needs, case management and behaviour, and case management and emotional, school and special needs, school and disability, school and behaviour and school and emotional, case management and school and nursing. The aim of the review to determine the state of play in terms of how case management is applied in schools by nurses and what has been demonstrated to be effective. This information has significance as a baseline from which to plan and evaluate services.

In a systematic review of the non-US literature on interventions for students with behaviour disorders, Gulchak & Lopes (2007) argued that prevalence of behavioural and emotional problems is a high as 22% in the US. People in this category have a very high (50%) dropout rate and 72% were suspended. This compared with 22% of children without emotional/behavioural problems being suspended from school. These children have obvious difficulties that impact

negatively on their lives, their families and schools. Although there is an established body of literature internationally it is mostly policy discussion and anecdotal evidence. There is a paucity of research addressing in school strategies to help this group of children (Gulchak and Lopes 2007).

Gilford et.al. (2010) in a discussion paper argued that when children are struggling in school, underlying causes often include physical or behavioral health problems, poverty, abuse, and/or neglect. Children with behavioral problems are much more likely than others to have lower grades, miss school, be suspended or expelled, and drop out. Given their primary role in children's lives, schools are a logical base for such coordination. The authors went on to describe a perceived to be successful program, offered across elementary, middle and high schools, in which nurses and social workers collaborate in case management (Gifford, Wells et al. 2010).

In the US public policy has driven the development of services that focus not only on the child but the family and health and welfare services that work with the child. In a study evaluating a training program for professional parent employees of a US service that provides case management and wraparound services for children with serious emotional problems Werrbach, Jenson et. al. (2002) found families highly valued being involved in all aspects of the management of their children's behavioural/mental health disorders. This service was committed to parent/caregiver involvement. In this service 55% of the board of directors and 50% of the staff are parents and/or care givers of children with serious emotional problems. According to the authors feedback from the training was that there were many benefits. Both parents and professionals benefited because the differences in perspectives between parent employees and professionals were reduced and the agency became a more cohesive place to work (Werrbach, Jenson et al. 2002). Unfortunately there was not a clear articulation of the method the authors used to evaluate the service.

Vermont's Wraparound Care Initiative was also a response to this US policy (Yoe, Santarcangelo et al. 1996). It was an intensive case management approach that emphasized aggressive outreach and care that is flexible and child and family centered. The program aimed to support children and families with severe emotional or behavioral disturbances. Yeo et al. (1996) presented a 12-month evaluation of the project. The participants were 40 children/young people referred to the program their ages ranged from 7 to 20 with years 85% under 18 years, mean age 16. Many were in care outside their homes (78% in substitute care) and received support to stay in school or were in special schools. The case management effectiveness was evaluated using: changes in living and education arrangements - that is moving to more or less restrictive environment changes in behavior that place them at risk of being removed from their homes and communities and placed in highly restrictive settings. Data collected included: the restrictiveness of their residence using Restrictiveness of Living Environment Scale (ROLES), the type of support they needed to stay in school using feedback from case managers and the Quarterly Adjustment Indicator Checklist (QAIC) was used as a measure of their behavior (Yoe, Santarcangelo et al. 1996).

The results indicated that after 12-months of case management participants who had been previously removed from their homes or were at imminent risk of such removal, were residing in significantly less restrictive community-based living arrangements with a mean level of restrictiveness reducing from 4.67 at the beginning of the study to 3.85 after 12 months ($t=2.24$, $p< .05$). They were exhibiting significantly fewer total problem behaviors than at intake using a QIAC ($t=3.02$, $p< .01$). Although there was not a significant change in their ‘externalizing behaviors’ that is their truancy, contact with police, suicide attempts and alcohol use. There also was little change in the restrictiveness of the schooling environment (Yoe, Santarcangelo et al. 1996).

In an evaluation of a Partners in Prevention (PIP) case management program Colvin, Lee et. al. (2008) investigated the effectiveness of the model of case management in four schools in Central New York state using Report Cards, the Behaviour Rating Index for Children (BRIC) and the Teacher Reported Form (TFR). The study included 606 children aged from 4-13 (mean 8.06). They were referred to the service because of problems that included academic problems, emotional difficulties, social issues and disruptive behaviours. Many of the children had more than one of these problems. The study collected baseline data using the instruments above and collected data every year for four years.

Results indicated that the students improved on all measures with case management using the PIP program. There was a significant improvement ($t=1.28$, $p<.0001$) in the overall scores on the report cards. There were gender differences with boys making a greater improvement than the girls in their grades. The TRF (which is a scale filled out by the teachers on 14 aspects of behaviour) demonstrated a significant improvement on most of the sub-scales in both boys and girls (paired t-test, $p<.05$) with boys showing improvement in more of the areas than girls. The boys did though have more problems at the baseline with their behaviour. The results from the BRIC (an instrument completed by parents reporting on behaviour problems) indicated that the children's behaviour improved significantly on all the sub-scales (paired t-test $p<.05$) on all 13 scales (Colvin, Lee et al. 2008).

The Australian Experience

In Australia concern for the discipline problems in schools was raised by the Ministerial Council on Education and Youth Affairs and lead to the establishment of establishment of the Student Behaviour Management Project in 2003 (de Jong 2005). The project reviewed behaviour management projects delivered in government and non-government schools across Australia and New Zealand. Only 20% of the programs was estimated to have had any

formal evaluation - de Jong concluded there is a lack of ‘hard’ evidence of what works (de Jong, 2005).

In Australia approximately 14 percent of children and adolescents have mental health problems and only one in four receives professional help (Sawyer et al., 2000 cited in (Australian Bureau of Statistics 2007)). In view of schools having the potential to promote mental health, a national Australian initiative called MindMatters Plus was established in 2002 to improve the capacity of secondary schools to cater for students with high support needs in health and wellbeing (De Jong and Griffiths 2008). This initiative was established to enhance the existing MindMatters project, a national mental health strategy for secondary schools aimed at improving mental health outcomes for all students. The project was managed by the Australian Guidance Counselling Association and the Australian Principals’ Associations Professional Development Council. As part of the initiative brief, it was expected that the guidance council develop evidence-based programs, processes and strategies that would build capacity of secondary schools to cater for high support need students. The development of effective school case management was one of these initiatives. School case management was considered to be a collaborative process designed to develop, monitor, disseminate and evaluate a plan of action which meets the needs of students who have high support needs. It usually included a case manager whose main task is to consult and communicate on an ongoing basis with the student, service provider(s) and other stakeholders (e.g. family, carers, and teachers) about the plan of action. The overall aim of this initiative was to produce a practical resource based on the principles and practices of effective school case management for staff, such as student support personnel, school administrators, school psychologists and mental health workers, who work with secondary school students who have high support needs in mental health and wellbeing.

de Jong and Griffiths (2008) published the only identified article that described a project which arose from the MindMatters Plus initiative. The project aimed to produce a practical resource for staff who work with secondary school students who have high support needs in the area of mental health (e.g. student support personnel, school administrators, school psychologists, school counsellors and mental health workers on the principles and practices of effective school case management). The article briefly outlined the school case management initiative – its rationale, and research and development process. This is followed by a description of the resource itself, namely the framework for effective school case management, and the kit for developing effective school case management practices. There is no formal evaluation of the project.

In Brisbane an early intervention project, called Early Impact Program (EI), was established targeting young (455 four to six year old) children, at risk of conduct problems, and their families from 10 schools (Larmar, Dadds et al. 2006). The schools were matched in pairs on the basis of socioeconomic status, size and then randomly assigned to the experimental or control group. The experimental group were given the EI program the control group received no interventions. Pre-school teachers screened the children at risk of conduct problems. The participating children had no serious physical disorder, developmental disability and untreated ADHD.

The EI program included both home and school components. The school component consisted of training for teachers in communication, friendship formation, social problem solving, self-control, and engaging in pro-social behaviors. The home component consisted of a parenting program that included parent's values, beliefs and experiences; parental authority; child development; communication; rules and limits; parent consistency; reinforcing appropriate behavior and consequences; problem-solving and ownership; assertiveness; managing anger; quality time; and parent preservation (Larmar,

Dadds et al. 2006).

The study examined children and parent's functioning at post-intervention and at 6-month follow-up. The authors looked at rates of conduct problems at post-intervention and 6 month follow up using parent diagnostic interviews and teacher and parent self-reports. Parents of children involved in the intervention completed the Strengths and Difficulties Questionnaire (SDQ) to report on the child's behavior at baseline, post-intervention and at 6 month follow up. In addition, parents completed an adaptation of the Alabama Parenting Questionnaire (APQ) to determine parent's management practices over the same time periods of the evaluation. DSM-IV diagnostic interviews were also completed at 6-month follow-up using the Diagnostic Interview Schedule for Children, Adolescents and Parents (DISCAP) to determine those children who met subclinical and full clinical diagnoses at post-intervention. Teachers involved in the evaluation completed the teacher's version of the SDQ, at base line, post-intervention and 6-month follow-up. Peer ratings were also completed using the Peer Nomination Interview Schedule, at baseline, post-intervention and 6-month follow-up. A series of measures was also administered to teacher and parent participants at post-intervention to determine participant satisfaction with the early impact program design and implementation process. These measures included the Teacher Self Report and the Parent Self Report.

The results of the early impact evaluation lend support for the school component of the program in reducing the incidence of challenging behavior over time. At post-intervention the findings drawn from teacher data revealed a statistically significant reduction in challenging behaviors in children in the experimental group in comparison to children assigned to control conditions. Findings in the home component found no significant effects on any of the measures. A likely explanation of the limited effects of the home component of the EI intervention was the minimal engagement of parents in the parent-

training sessions. Approximately 80% of parents only participated in a third of the parenting program. Despite limited changes at the level of the home, the evaluation did reveal high levels of satisfaction in terms of the program's utility across a range of home and preschool settings (Larmar, Dadds et al. 2006). This program may have been more effective if there had been a coordinator or case manager.

Evaluation of case management in schools by nurses

As discussed above more children with identified special needs are attending mainstream school, and some of them struggle. School-based case management by nurses has been suggested as one strategy to improve the academic success of these children. Nurses, by virtue of their education and expertise, may be the most appropriate persons in the school setting to provide case management to children with physical, behavioural and mental health problems (Engelke, Guttu et al. 2008). The published evaluation of nurse case management is predominantly centred on support of students with primarily identified physical problems.

In a discussion paper on the potential for nurses to be case managers in schools Barrette argued that having a nurse case manager can contribute positively to the outcomes for children with special needs (Barrett 2000). The author to make her case described a project in which a US college implemented a case management program that used student nurses as case managers as part of their clinical practice. The students were allocated a child for the semester and attended meetings with health and welfare services, schools and the families in their homes. The families reportedly valued the rapport developed with the students. Families also reportedly valued having a case manager (even though they were students) as there was perceived better coordination between services (Barrett 2000).

Some studies support the view that nurses working as case managers can contribute to positive academic and health-related outcomes. In a pilot study, in Pitt County in the USA, Farrior, Engelke, Collins & Cox (2000) investigated a model of case management of children with special needs. The case manager's role was to coordinate care. Whilst there is little detail on the study the authors concluded that case management helped build collaboration between the agencies. Further funding meant that the case management plan was expanded.

In a later study, again in Pitt County, using 48 students with asthma Crickmore, Jones, Engelke, and Mott (2002) investigated the impact of case management on the children with asthma. The children were referred to a case manager whose was responsible for the coordination of care including facilitation of dialogue between physicians, school nurses and families. Results from descriptive statistics indicated that as a result of case management there was an improvement in lung functioning. Lung functioning was assessed using peak flow rates. At the beginning of the project only 49% of the children were in the desirable range at the end of the 90% were in the desirable range. As well at the end of the project all the children's lung function had improved. Although this was a small study it informed the expansion of the program (with support from pharmaceutical companies) across all the schools in the county.

A much larger study undertaking in the USA, using retrospective data, found that case management of children with asthma by school nurses led to an increased likelihood that children would have emergency medications available at school and that children who needed to would be more likely to use peak flow meters (Taras, Wright et al. 2004). This study used three years of school records to investigate the effects of an established school nurse case management program the outcome for 16,197 children, from 157 schools, with a diagnosis of asthma. Results indicated that with case management the children were significantly more likely to carry asthma

medication to school (with case management 54-61% no case management 34%. T value not reported p<.01), to use a peak flow metre at school (with 22-24% no -8%, t value not reported, p < .01) (Taras, Wright et al. 2004). Although there was no significant impact on absenteeism case management by nurses was shown to be effective strategy to support students with asthma.

Engelke, Guttu et al (2008) conducted a 12 month study that tracked the academic, health, and quality of life outcomes for 114 children with asthma, diabetes, severe allergies, seizures, or sickle-cell anaemia in 5 different school districts. These children were provided case management by school nurses. The children ranged in age from 5 to 19 years. The school nurses were trained as case managers. Their training placed emphasis on supporting the students, with a chronic illness, whose needs were ongoing and interfering with their performance at school. The training also stressed that case management was more than crisis intervention and involved commitment to working with the child and family for an extended period.

Base line data were collected at the beginning of the study and again at the end of 12 months of case management. The instruments/evaluation strategies used in this study were: for quality of life the PedsQL, health outcomes were negotiated with each child and their families; academic performance was evaluated using grades and end of year testing. The study was limited by convenience sampling. Results indicated that at the end of the school year, children experienced an improvement in quality of life when compared to their base line (Eta .19-.47 p < .01) and gained skills and knowledge to manage their illness more effectively that is most children achieved between 60-100% of their target goals. Classroom participation, grades, and participation in extracurricular activities also increased for many children. There was no significant difference in the attendance – perhaps this was impacted on by factors other than illness (Engelke, Guttu et al. 2008). The study provided evidence of the positive impact that school nurses can have on children with chronic illness.

In a randomized control study Levy et. al. (2006) evaluated the effectiveness of a school-based asthma case management in fourteen primary/elementary (6-13 year old children) schools. Schools were randomized to either a case management nurse intervention (8 schools) or a usual care group (6 schools). The schools were matched on school size, percentage of children with asthma, ethnicity of the children and percentage eligible for welfare support. The case management group included 115 students; 128 students were in the usual care group (UC). In the case management schools, nurse case managers conducted weekly group asthma education sessions, followed up on students' school absences, and coordinated students' asthma care with families, school personnel, and medical providers. In UC schools, students received routine school nursing services (Levy, Heffner et al. 2006).

For this study a twelve-month longitudinal design was used to follow students' progress. Data collected included school absences, hospital utilization and student and parent's knowledge of asthma and skills related to asthma management. Data sources included school records for absences, hospital records and parent and student telephone surveys for asthma knowledge and skills. Results indicated students in case management schools had fewer: school absences than their counterparts in UC schools (M= 4.38 vs. 8.18 days, respectively), emergency department visits (M= 1.36 vs 1.59, respectively) and days in hospital (M= .18 vs .45). Results also indicated the children and parents, using a pre and post test assessment, in case management schools had improvement in asthma knowledge. The student's mean went from 40% to 87% correct answers to test questions. Parents results not reported. Students from the UC group were not surveyed for asthma knowledge. Return rates were too poor from the UC group parents to compare results (Levy, Heffner et al. 2006).

This study gives us some indication of the effectiveness of case management but there are limitations to our ability generalize the findings from this study.

Although the schools were randomized the participating families self selected. Even though there were a variety of strategies used to address drop outs 24% of the case management group and 44% of the UC group parents couldn't be contacted for the post survey. The authors also observed that the commitment and support of case management by the school administration was critical to its success. Further 97% of the children in the study were African-American; this is consistent with the population of the schools and the school districts but is not clear if these results would be similar across other groups (Levy, Heffner et al. 2006).

In the evaluation of a case management project Bonaiuto (2007) concluded that the case management improved outcomes for students with special needs. This quality improvement project collected data retrospectively from up to 240 students with special needs across for four years. The data were collected from school records. In addition, 84% of the students who were case managed improved in 1 or more of 5 target areas. These target areas included attendance (34% of students improved), behaviour (27% of students improved), academic performance (29% of students improved), self reported quality of life (59% of students improved), parent/teacher reported quality of life (7% of students improved) and health compliance (3% of students improved). The study is limited by no provided data on non-case managed students to allow comparison. The nurses involved in the project remained committed to the development of case management (Bonaiuto 2007). The study is further limited by no clear discussion of the method used to evaluate the targets.

In Wales a service was set up that aimed to empower parents of children, with disabilities and complex needs, making the transition to school. This was in response to a perceived fragmentation of services to children and young people with severe disabilities and their families (Appleton, Böll et al. 1997).

The central features of this model of case management included: empowerment of clients and there carers; individual tailoring of service provision and interagency collaboration and a ‘named’ case manager. A ‘named’ case manager was a professional assigned to the family who was independent of the education system and has a role in coordinating services to the family. Importantly the ‘named’ case manager was reported to be viewed by the families as working for them and supporting them in the transition of their child to school. The ‘named’ case manager may be a social worker, nurse, physician, teacher or field worker with a voluntary agency. The decision was made by the family depending on their perception of their needs (Appleton, Böll et al. 1997). The model of ‘named’ case manager was expected to impact on parental empowerment, improved individual tailoring of service based on assessment of need, inter-agency collaboration beyond existing team boundaries, continuity of ‘named’ professional contact across transitions important to families.

This study aimed to explored the effectiveness of this model of case management for 20 children, aged 2.5–3.5 yrs with complex or severe impairments, making the transition to preschool (Appleton, Böll et al. 1997). In depth interviews were used to explore the experiences of the families and case managers three months after the beginning of the project. The case managers included eight medical officers, two social worker and two nurses. Both families and case managers said; that they felt empowered by the process, there was improved matching of needs of the children and families to services. Parents indicated that they valued having a ‘named’ case manager and that they (the parents) should be involved in decision-making (Appleton, Böll et al. 1997).

Conclusion

Life can be challenging for children with mental health /behavioural problems. It is also challenging for their families, their schools and teachers. These

children often find it difficult to fit in with their peers and academic success often eludes them. If they do not get the support they need the stakes are high. As they progress through their school career without appropriate and targeted support their difficulties can worsen. As discussed this group of children are more likely than their peers to have contact with the juvenile justice system, abuse substances, find it difficult to establish and maintain meaningful social relationships and are more likely to drop out of school early. These outcomes not only effect, and come at high cost emotionally and financially to the child/young adult and their families, but the community generally in terms of cost of service provision and opportunity cost. Mental health nurses by virtue of their ability in assessment and treatment of people with behavioural and mental disorders and ability to work with family, school and health systems are ideally placed to work as school nurses. In Australia there is merit to trial child and adolescent mental health nurses in the emergent school nurse role. Rigorous evaluation is required to demonstrate impact and refine models of care.

Current services work, if they exist, on making periodic visits or checking up on those in need. For this new model of service to support children with a behavioural/mental health disorder - mental health nurses as case managers fits the developing view, of the Australian College of Mental Health Nurses, that mental health nurses offer a holistic service. Mental health nurses can offer family therapy which is holistic in nature ,education for teachers and other workers in the ways of managing such children. Nursing is the logical group to develop because of its mixture of clinical know how and co-ordination roles, as well it is the only health workforce equipped to work with a client group from the most fundamental to the most complex.

There are also system benefits, to using mental health nurses in this model, not addressed in this paper. Mental health nurses working beside teachers in supporting children with behavioural/mental health disorders would improve mental health literacy. The benefits would not only be around child hood

mental health but also improve mental health literacy generally. This could be reflected in a more open accepting attitude to discussion of mental health in schools generally and may be reflected in curriculum development.

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