

Evaluating three school-based integrated health centres established by a partnership in Cornwall to inform future provision and practice¹

Reynold Macpherson, *Reynold Macpherson Ltd.*

International Journal of Educational Management, 27(5), forthcoming, June 2013.

Abstract

Purpose – The aim of this paper is to report the process, findings and implications of a three-year evaluation of integrated health centres (IHCs) established in three secondary schools in Cornwall by the School-Based Integrated Health Centres (SBIHC) Partnership.

Design/methodology/approach –When the partners had completed the capital works, an evaluation strategy was designed for 2009-2012 to identify the extent to which each of the IHCs was meeting the aims set for them, and each IHC and school was contributing to the aims of the SBIHC project. Formative and summative evaluation used annual case studies to apply data progressively regarding (a) the use, users and operations of each IHC, (b) students' perceptions of the user-friendliness of the IHCs, (c) indicators of the general health and well-being of students and their sexual and mental health, (d) students' exposure to crime, substance abuse and poverty, and (e) students' academic achievement, attendances and exclusions. This process culminated in this paper which reports and discusses findings, suggests implications for practice, theory and research and proposes future directions for the partnership.

Findings – All three schools engaged students closely in the design and decoration of their IHCs to create attractive reception areas leading into modern clinical and group meeting rooms. Student ownership was extended into the selection of coordinators and into centre management and governance, alongside school, community and provider representatives.

Budehaven Community School appointed a National Health Service (NHS)-trained coordinator for their IHC, The Haven. He was a male mental health worker funded for one year by the NHS. When he took a permanent NHS post elsewhere at the end of 2009-2010, his responsibilities were thereafter shared between the NHS-trained medical secretary/personal assistant, and the manager, an assistant head teacher.

The Haven was established in a converted caretaker's bungalow. During 2011-2012, Year 3, Budehaven added a 'co-location' building, Kevren, with hot desks and small meeting

¹ This paper is a revised version of the final report presented by the evaluator to the Steering Group of the SBIHC Project on 19 October 2012. While individual identities have continued to be protected, the three head teachers decided that their names and the names of their schools and IHCs might be published to assist with the dissemination of the findings and inform practice elsewhere. To this end, the author may be contacted at reynold@reynoldmacpherson.ac.nz, the head teacher of Budehaven, David Barton, is at DBB@budehaven.cornwall.sch.uk, the head teacher of Hayle is at Chris.Jackman@hayle-comm.cornwall.sch.uk, and the head teacher of Penair, Barbara Vann, is at head@penair.cornwall.sch.uk.

rooms to extend the reach of the IHC in order to pioneer a community health support service. The health, welfare and educational professionals hosted have exhibited early forms of interprofessional collaboration (IPC). About 37 professionals are now located in or visit The Haven and Kevren weekly, each either funded by the school, the NHS, charities or Cornwall Council. Student footfall doubled to about 4,000 in the second year of operations, and increased by another 25% in the third year due to additional users from the community.

The wide range of general, mental and sexual health services, which focus on prevention and students making informed choices, were found to be highly valued by the students. A solely positive association was found between visits made to The Haven, academic progress, attendance and exclusions and a sharp fall in students' engagement with the Youth Offending Service (YOS). Students' exposure to crime, substance abuse and poverty remained constant. Unsatisfactory sample sizes meant there was an imprecise knowledge of the perceived user-friendliness of The Haven and student mental health status. Budehaven plans to move towards a more evidence-based approach to improving professional practices and integrating health services with in-school interventions, curriculum development and community outreach.

The Crayon, the IHC in Hayle Community School, achieved a similar footfall over the three years, similarly engaging students in design, management and governance from the outset. It was also housed in a converted caretaker's bungalow. It started with a Receptionist and the Pupil Welfare Officer, a nurse, with many other health and welfare responsibilities distributed across the school. The Manager, a deputy head teacher, and the head teacher triggered a major turn round at the end of Year 1 by moving most student support services into the IHC. From then on the Crayon had three full-time and highly collaborative professionals serving only school students. By the end of Year 3, with a growing number of visiting professionals funded by the school, the NHS, charities and Cornwall Council, the Crayon had reached the limits of its facilities.

Perceptions collected using the User Friendliness Survey (UFS) affirmed that Hayle students strongly appreciated gaining access to the health services they prefer, a welcoming atmosphere, confidential services, caring and supportive staff and health professionals, high quality information and advice, and being able to improve the user-friendliness of their centre. Mental health data collected in two year groups over the three years showed the substantial impact of mental health innovations, pointing to the combined effects of targeted individual and group interventions delivered through the IHC, and the targeted cohort, whole-school and beyond-school interventions, and the customised professional development organised by senior staff.

External data indicated effective levels of sexual health self-management by students while their exposure to crime, substance abuse, domestic violence and poverty had remained constant. A solely positive association was found between IHC usage and measured improvements to mental health and academic progress. Hayle students' attendances also improved, exclusions stabilised and their engagement with YOS fell sharply. Plans focus on housing additional health and welfare professionals from the NHS, charities and Cornwall

Council experienced in working with children and young people to extend services into the community.

The IHC in Penair School, Bywva, was a fresh build. It developed a wide range of general, sexual and mental health services and attracted a similarly strong footfall. It also reached capacity during Year 3. UFS data confirmed that students regarded the user-friendliness conditions noted above as essential. Students helped select two co-coordinators, one a social worker and the other a person experienced in working with young people, who job shared until a functional review in early Year 3 refreshed expectations and they negotiated separations. Penair refined their IHC's line management by an assistant head teacher and coordination by a lead practitioner who was transferred from the Learning Support Centre. Two other lead practitioners and three pastoral support workers were also transferred into the IHC for 2012-2013 to help safeguard students and take up family case loads, and to implement Penair's policy of delivering family-centred community health services through IPC.

The presence of the Bywva in Penair was closely associated with major in-school advances in evidence-based practice. They included the ground-breaking Health, Fitness and Wellbeing curriculum and the associated personal weight management programmes, the Fitness Suite and the Trim Trail. The Student Information Management System (SIMS) was re-engineered to embed the analysis of student mental health into academic progress reviews and to provide integrated evidence for planning individual, group, cohort and whole-school interventions, and for targeting professional and curriculum development.

External data showed that students' sexual health self-management had remained effective and that their exposure to crime, drug abuse and violence had remained constant. A solely positive association was found between students using the Bywva, students' sexual and mental health, academic progress, and a significant fall in youth offending. In September 2012, the Cornwall Foundation Trust² decided to convert the caretaker's bungalow beside Bywva in order to host many more health and welfare professionals from the NHS, voluntary organisations and Cornwall Council. Since this move was driven in part by a need to cut the cost of down-town offices, it is not yet clear if it will result in greater IPC in the Bywva.

Nine themes found in the data centred on the key relationship between students and professionals and were used to create a provisional ecological model of school-based and integrated health care. It was concluded that the three IHCs achieved most of the aims set for them by the SBIHC Steering Committee, and that they and their schools made important contributions to the aims of the project.

Research limitations – This trial of a school-based integrated health centre model of care was partly limited by the PCT not commissioning the part-time participation of doctors and nurses, although two schools were able to modify and embed the services of their school nurses in their IHCs. To this point, service development has focussed more on the needs of adolescents than on the needs of children in each school area. The provision of data by

² The CFT was given charge of children's health services from late 2012. The PCT commissioners are to be replaced early in 2013 by the Kernow Clinical Commissioning Group which will comprise general practitioners. It is not clear if the new commissioners will fund doctor's clinics in school-based integrated health centres.

Cornwall Council personnel encountered difficulties due to the databases used by health, welfare, educational and police services being based on different boundaries; near approximations to school catchments had to be used. The Health and Wellbeing Improvement Tool (HWIT) was withdrawn as unreliable by the Healthy Schools Plus Programme in Year 2 of the trial; the schools each developed unique solutions. Budehaven did not collect adequate samples of UFS and Pupil Attitudes to Self and School (PASS) data but will do so in coming years. The greatest limit was that the research was confined to three sites over three years. Together, these limitations may have slightly impaired the development of each of the three IHCs and understated accumulating effects. They indicate that the findings are to be regarded as provisional, and that only preliminary generalization is warranted prior to further research.

Research implications – The practical implications of the findings for the development of IHCs begin with student ownership. Sustaining student engagement in the design, management and governance of IHCs and applying students’ perceptions of their user friendliness were shown to be critical to the effective development and continuous improvement of IHCs.

Five practical implications for schools were the importance of (1) using standardised tools annually to screen general health and wellbeing and mental health, (2) eliciting data from Council personnel to understand trends in school catchments regarding sexual health and exposure to crime, drug abuse, violence and poverty, (3) relating progressive health data to the value added by the schools regarding educational progress, (4) enhancing the role of SIMS in providing integrated intelligence for evidence-based practice, planning, interventions and development, and (5) separating the line management and annual evaluation of IHCs.

Two immediate implications for the SBIHC partnership are the need to disseminate these findings and to consider follow up. Both imply the need for a fresh coherent strategy for the next phase of the SBIHC Project and the need to revitalise the Steering Group. A programme is recommended with a County-wide remit to facilitate the establishment of more IHCs, expert support for head teachers and schools wanting to develop an IHC in spare space, Council administrative support for the Steering Group, and pound for pound investment in IHC conversions up to a limit of £10,000, on five key conditions. The findings of this project would suggest that such investment should be contingent on schools guaranteeing (1) student engagement in design, management and governance, with staff, governor and provider representation, (2) reporting universal and annual surveys of the user friendliness of IHCs, general health and wellbeing and student mental health to the Steering Group, (3) reporting sexual health data as well as exposure to crime, substance abuse, violence and poverty from Council sources, (4) developing SIMS to integrate health information flows into school reviews, planning, interventions and developments, and (5) hosting NHS, charity and Council health and welfare professionals in a context of IPC to address identified health needs in their catchment area.

The need for theory development was identified in three areas; how IHC services impact on student learning, how IHCs affect the pedagogy, curriculum and organisation of schools, and, the role and leadership of IPC in school-based integrated health services. Further

research might measure the effect of school-based integrated health services on student health and academic progress, and measure the comparative effectiveness of the SBIHC model of care over time.

Originality/value –The first unique feature is that the SBIHC Project and its evaluation was mounted by a partnership comprising charitable, private and public entities; The Duchy Health Charity, The Prince’s Foundation for Integrated Health (PFIH, since replaced by the College of Medicine), the Cornwall and Isles of Scilly Primary Care Trust (PCT) of the NHS, the Directorate of Services for Children, Young People and Families (CYPF) of Cornwall Council, the Peninsular Medical Schools and three schools; Budehaven Community School, Hayle Community School and Penair School. Second, this evaluation is the first to report a formative and summative evaluation of IHCs using case studies with a blend of qualitative and quantitative data. Third, while American and Canadian studies have indicated the benefits of IPC in IHCs, this is the first that has highlighted the need to develop and reconcile IPC with student engagement in the management and governance of IHCs and with the other conditions that students continue to regard as crucial for the success of IHCs. Fourth and finally, this paper offers a new conceptual model of the SBIHC model of health care centred on the reciprocity and integrity of relationships between students and professionals.

Keywords—children, adolescents, school-based integrated health centre, model of health care, general health, wellbeing, mental health, sexual health, interprofessional collaboration

Paper type—Research report

Introduction

The evolution of the SBIHC project, and the role to be played by evaluation, traces from the Annual Duchy Health Charity Seminar held 30 June 2006 entitled ‘Health challenges for young people in the 21st century - Thinking across boundaries.’ The seminar was organised in response to *Every Child Matters: Change for Children*, the national framework for local change programmes intended to reconstruct services around the needs of children and young people (Department for Children Schools and Families, 2004). The Cornwall Youth Forum (2005, p. 14) had evoked the United Nations Convention on *The Rights of the Child* to call for health services characterised by confidentiality, accessibility, user friendliness, better information about services, and better advice and support regarding sexual health, drug and substance abuse, and mental health. This section indicates how the seminar related to a wider context of health policies and emerging ideas about the effectiveness of interventions and models of care for young people.

The main challenge identified for Cornwall at the seminar was to integrate hitherto separate services in education, youth, social care and early years with health services, especially those focusing on disabilities, mental health, sexual health and drug and alcohol abuse (Ashton, 2006). Integration was required, it was argued, to maximise opportunity, minimise risks and respond to young people’s perceptions of their needs and preferences regarding delivery systems. Integrating services for children, schools and families then became national policy (Department for Children Schools and Families, 2007).

Conceptual challenges came with this integration agenda (Logan, 2006a). The first was how to revise the notion of ‘child health’ in a context where adverse lifestyles increasingly included the misuse of drugs, tobacco and alcohol, decreasing physical activity and poor diets. The second was how best to revise the traditional notion of intervention in child health. Interventions, it was argued, would have to cross disciplinary and organisational boundaries, have widespread community involvement, take account of the dispositions of children, young people and families, and be delivered in a dispersed population.

The urgency of mounting more effective interventions supported by more efficient models of care grew with mounting evidence in the USA of statistically significant differences in academic achievement between underweight, healthy weight, overweight and obese students (Clark, Viglietta, & Slate, 2009). In Britain, the Teenage Pregnancy Strategy Evaluation reported that young people were increasingly turning to school-based services, help lines and websites (Teenage Pregnancy Unit, 2005). Nurse-led school-based provisions in British schools were increasingly being preferred by adolescents because they offered confidential, comprehensive and accessible health services (Peckham & Carlson, 2003). Earlier studies had indicated clear benefits for young people (Nelson & Quinney, 1997; Osborne, 2000), especially their effectiveness at delivering sexual health services (Thistle, 2003).

School leaders in New Zealand interested in establishing IHCs were supported by the Ministry of Health. There are, today, proportionately more IHCs than in any other country. Guidelines were issued, *Improving the health of young people: Guidelines for school-based health care* (MoH NZ, 2004), which synthesized recent initiatives, the experiences of the GPs’ groups and seven schools that had helped pioneer school-based integrated health centres. They were soon supplemented by the *Successful School Health Services for Adolescents: Best Practice Review* (Winnard, Denny, & Fleming, 2005) which used international research to clarify areas critical for the success of school health services; wide engagement with the community, youth focus and participation, delivery of high quality comprehensive care, effective administrative and clinical services, and active governance to support service delivery.

The potential effectiveness of particular interventions in a school-based model of care was indicated by the AIMHI pilot³ in New Zealand (Earp, Dawson, & Davison, 2007). An early finding regarding interventions and models of care was that “BMIs have decreased in schools where the local community has established health eating initiatives alongside school-based programmes and sustainable external service provider partnerships” (2007, p. 6). The PricewaterhouseCoopers evaluation of the Evaluation of Healthy Community Schools Initiative in AIMHI Schools in 2009 encountered strong evidence in support of the *Best Practice* conditions for success. It went further and identified the key factors that influenced the effectiveness of school-based health services in the AIMHI schools (Ministry of Health, 2009, p. 12):

³ The Achievement in Multicultural Schools (AIMHI) project was funded as a pilot from 2001 by the Ministry of Education in partnership with the Counties Manukau District Health Board and the Ministry of Social Development. See <http://www.aimhi.ac.nz/> Curiously, while the Ministry of Health has commissioned a number of evaluations of the Healthy Community Schools Initiative in AIMHI Schools, New Zealand is yet to commission a systematic study of the effects of IHCs on student health and educational outcomes over time.

- support from the school principal, board of trustees and school staff
- youth-friendly, confidential and private service that students can trust
- student input in the provision of health services and initiatives
- a committed partnership between health and education to ensure the appropriate resources and support
- experienced and mature practitioners who are qualified and confident in their role with youth and within the education setting
- a ratio of nurses to students that adequately addresses student need
- practitioners who embrace opportunities to actively promote and support the health of young people, as opposed to taking a passive ‘band-aid’ approach
- ready access, preferably on-site, to a medical practitioner at least once per week
- a purpose-built and designed facility that ensures the privacy and safety of students and staff
- a supportive infrastructure both within the school and externally, from the provision of a receptionist and governing body to professional development and collegial support.

It is notable that these findings cohered with the service integration and ‘multi-component school and community programmes’ approach recommended by Britain’s National Institute for Health and Clinical Excellence (NICE) (2009, pp. 21-22). Empirical indications of the general efficacy of school-based interventions improved with 27 systematic reviews that examined their relationship to adolescents’ health (Barlow, Tennant, Goens, Stewart-Brown, & Day, 2007). Two reviews stood out. One was of 165 controlled studies of school-based prevention programmes intended to reduce crime, substance use, dropout/non-attendance and other conduct problems (Wilson, Gottfredson, & Najaka, 2001). It demonstrated the modest effectiveness of either individually- or environmentally-focused interventions with markedly greater effects where the approaches were used in concert.

The other review was of 17 controlled studies of school-based mental health promotion interventions that took a universal rather than a group or individual approach (Wells, Barlow, & Stewart-Brown, 2002). Although the number of studies was small, the review reported the more positive outcomes of the effectiveness of programmes that (a) took a long-term, cultural change and whole- and beyond-school approach, compared to short-term and classroom-based interventions, and (b) aimed at promoting universal mental health rather than preventing mental illness in individuals. The former finding implied the need for complex and customised in- and beyond-school interventions, while the latter implied the value of schools offering mental health education as part of their Personal, Social and Health Education (PSHE) curriculum.

There was also growing awareness in England of the limitations of the practitioner-centric model of health care for young people. The recommendations from the Department of Health (2004) about how doctors and other health professionals should provide sexual health advice and treatment to young people under 16 assumed a context of a medical practice. Similarly,

advice on nursing best practice also continued to assume a professional-centric model of care, although studies were suggesting the value of student-centred ‘drop in’ services as part of a school-based model of care (Chase, Goodrich, Simon, Holtermann, & Aggelton, 2006). There were also a growing number of studies and reviews by national and international peak bodies that argued that confidentiality and student ownership were crucial prior conditions for the effectiveness of services to teenagers (Health Development Agency, 2001; Osborne, 2000; Royal College of General Practitioners and Brook Advisory Centre, 2001; World Health Organization, 2002).

North American studies explored the idea that school-based and integrated models of care required an organisational norm of interprofessionalism, with leadership services directed to that end. Corrigan (2000) noted that administrative coordination in IHCs could mean separate delivery without requiring professional partnerships. Cooperative professionalism could mean more interaction without any loss of professional autonomy. IPC, however, implied formal management and governance structures that guaranteed collective decision making and problem solving. IPC delivered services that individuals or organizations could not deliver alone, and, uniquely, enabled “creative approaches to intervention and improvement strategies which necessarily require identity changes in roles” (Salm, 2009, p. 2). Hence, IPC theoretically enables organisational learning and therefore requires educative leadership (Duignan & Macpherson, 1992).

The development of IPC in Cornish IHCs would, also theoretically, require the development of inclusive management and governance, and both internal and external collaboration between education, health and welfare professionals. The outcomes, it follows, would feature professionals collaborating to deliver community health care services to families, as well as contributing to evidence-based curricular, pedagogical, pastoral care and organisational reforms in school. It is notable that all three schools adopted IPC as an organisational principle for their IHCs.

The immediate and practical challenges identified at the Duchy Health Charity Seminar pointed to the need for active leadership and pathways towards IPC. The Seminar called on agencies to (a) create projects based on effective partnerships, (b) reduce the fragmentation of services by integrating the ‘silos’ encountered by young people, (c) develop multi-agency teams and lead professionals within teams, and (d) intervene early and share information more effectively between professionals (Cloke, 2006). There were two ‘calls for action’ made at the end of the seminar; (1) the need for proactive leadership of “grand level ... to make a difference, with accountability” (Cloke, 2006) and (2) the need for “visible projects at a local level with real evidence of partnership between groups.” (Logan, 2006b)

The SBIHC Project

The Duchy Health Charity Trustees were provided with a number of analyses to help advance the design of an appropriate project. Four contributions were particularly influential

First, the head teacher of Penair School visited some New Zealand SBIHCs in mid-2006 and returned to propose a three-part integrated health and education service delivery strategy (Vann, 2006) comprising (a) a health awareness campaign involving health professionals

linked to schools' PSHE and other curricula, (b) authority-supported curriculum realignment across all schools, and (c) school-based health clinics and services being established with collaborative management that included students. As the first two components were taken up as initiatives by the CYPF, Dr. Vann's resolute leadership thereafter focussed on the third; the trialling of IHCs as a model of care.

Second, a survey of general practitioners in Cornwall in November 2005 (Gray, 2006) asked respondents to identify the "most pressing health issues" for the under 18's. The most frequent responses by category were to substance abuse, sexual health, mental health, physical health, appropriate health services and lifestyle/ social issues. Interestingly absent were references to infections (the major killer for the under 5's), immunisation (politically sensitive), and cancer. Helpful comments referred to the paucity of mental health services for young people, the influence of dysfunctional families, emotional health, health education, the importance of self-worth when dealing with bullying, targeting boys for contraception and sexual health, physical exercise, and channelling resources. These 'most pressing health issues' were used to form a framework of indicators of integrated health services and data collection in the project.

Third, a general practitioner offered a concept of holistic and integrated services (Dixon, 2006) on behalf of The Prince's Foundation for Integrated Health (PFIH, 2006). This concept was later elaborated into principles for integrated health centres (PFIH, 2007) that were then further refined for application in school-based centres. These principles stressed the importance of young people's access to holistic services, overall health and wellbeing, coherence between health services and each school's ethos and practices, resource sharing and professional collaborations, and extracurricular connections to the natural and local environment (Cambray-Smith, 2009). They cohered closely with research findings noted above and those by NICE, especially those to do with IPC, and were adopted as design principles for the project and IHCs. These principles were further advanced by a planning grant to the project by The Prince's Foundation for Integrated Health.

Fourth, Cornwall's Children and Young People's Partnership (CYPP) (2007, 2008) provided evidence-based needs assessments regarding young people's health, safety, enjoyment and achievement, making a positive contribution, and achieving economic well-being. These needs assessments were compiled to inform the strategic development of children and young people's services, as required by *Every Child Matters*. Although this policy, which stressed child-centred services, was eventually displaced by a family-centred approach with a change of government, the CYPP's appreciation of students' needs persisted and was foundational to the project's continuing focus on prevention and informed choice-making by students.

The Duchy Health Charity's Invitational Working Dinner held 2 March 2007 drew together lead professionals, students and partners' representatives to formalise commitment to the partnership's development of SBIHCs. Participants were subsequently invited to submit "six key recommendations to be built into forward plans for the project" by the Project Team (Ashton & Cloke, 2007). This request triggered systematic consultations in a wide range of stakeholder groups and resulted in considered feedback.

The PCT, the key funding agency of health care services, declared support in principle and stressed the need for (1) systematic deliberation and planning, (2) the involvement and views of young people and parents, (3) school-based resources being embedded in a countywide menu of services, (4) a strong and central emphasis on prevention, and (5) services needing to be inclusive and accessible to all (Edlin, 2007a). The third condition of county control over resources was inconsistent with the emerging concept of a school-based integrated model of health care. Further, the PCT did not fund the part-time engagement of doctors to join collaborative teams in IHCs and to share management and governance with students. On the other hand, the performance contracts of two school nurses already appointed to Budehaven and Hayle were able to be adjusted locally through school-based negotiations to cohere with the SBIHC model of care.

Despite this anomaly, the formal commitments obtained from other partners enabled the establishment of project infrastructure. Cornwall Council designated senior administrators in the CYPF and CYPP to lead a “multi-agency project team ... responsible for creating a model ‘protocol’ for approval by the project steering group in September 2007” with a view to implementing three pilot centres in selected secondary schools in “phase one of a five year roll-out” (Chappell, 2007). This Project Group also developed terms of reference for the project’s Steering Group, a project timeline and a preliminary health needs analysis—to underpin the selection of three sites and the design of the evaluation.

Quantitative indicators of health outcomes in Cornwall were initially used to create a model protocol for health centres, consult stakeholders, health practitioners and educationalists, and later, to help select three school locations. They included deprivation, teenage pregnancy, drug and alcohol abuse, not in employment education or training, unemployment (NEET), single parent families, truancy and exclusion, educational attainment, sexually transmitted infections, and youth involvement in crime (Messenger, 2007; Mewton, 2007a, 2007c).

The policy context nationally and regionally continued to be turbulent. By 2005, the importance of confidentiality and user-friendliness as foundational principles for school-based health services were being supplemented by a growing concern for accessibility, that is, students getting access to the services they preferred. This shift can be traced to a joint decision by national education and health authorities to share the target of halving the under-18 conception rate by 2010 (Department of Education and Skills, 2005, p. 1; Department of Health, 2005a).

Consultations with young people in 2008, prior to the development of a new national health services strategy *Healthy lives, brighter futures*, reiterated these three principles and target (Department of Health and Department for Children Schools and Families, 2009, p. 107). This health services strategy required the two Departments to work in partnership with local authorities and PCTs and those promoting health services to build the quality of support, although there was no explicit policy commitment to the SBIHC model of care as an organisational solution for such integration.

The ambivalence in the PCT towards the SBIHC concept seemed to deepen. The ‘provider arm’ of the NHS children’s services were interested in IHCs that improved signposting,

enabled inter-agency communications, and served as hubs of services in “the settings where 90% of young people in a catchment congregate much of the week” (Cook, 2009). Similarly, the ‘commissioning arm’ of the NHS children’s services were looking to the IHCs to empower the users with immediately accessible high quality guidance and advice and other customised services in the conditions of confidentiality they preferred. However, the PCT added four concerns to its earlier expectation that school-based resources had to part of a ‘countywide menu’ of services.

Despite the CYPP’s needs assessments, the PCT argued there was a deficit of accurate knowledge concerning students’ health and wellbeing status, and developed the Young Peoples’ Health and Lifestyle Survey 2007 (Edlin, 2007b). Other challenges they saw included (a) a culture of medical specialisation underpinning health service provision, (b) the need to retain the trust of parents, and (c) the need to reconcile protocols for sharing information and ways of working (Houghton, 2009). These views apparently underpinned the PCT’s reluctance to fund a trial model of delivery not centred on medical specialisation or to reconcile NHS information systems and access protocols with those used in schools, as later evidenced in Budehaven.

The SBIHC model of health care was, nevertheless, advanced by the continuing policy campaign mounted by the head teacher of Penair in combination with other forces. Educational professionals were becoming increasingly critical of the effects of fragmented health services on learning. Some were looking forward to reconciling their use of the Gillick competencies (Brook Charity, 2009) with health and social welfare professionals, especially with regard to responsibilities for supporting those over 16 facing family breakdowns (Owen, 2009). Social workers also recognised this anomaly, along with other potential challenges. They were seeing ‘community schools,’ like Budehaven and Hayle, already beginning to (a) host integrated health and other services, (b) extend their reach and the effectiveness of individually- and school-focused programmes through collaborating in beyond-school interventions, and (c) wanting to strengthen the financial and political sustainability of their school-based and integrated health services. There was also growing acceptance by local partners and national agencies that school-based arrangements were becoming more effective at integrated service delivery for adolescents than town-centre or medical-adjunct centres (Moss, 2009).

In sum to this point, the scope of IHC services was largely defined by a head teacher’s policy campaign, the GPs’ survey, the Duchy Health Seminar and the CYPP’s needs assessments, despite the ambivalence in the PCT and its reluctance to fund doctors’ clinics in schools. The policy campaign and debates sharpened the focus on preventative health services for children and young people and the need to trial integrated service delivery in schools. The Invitational Dinner confirmed support for basing pilot integrated health centres in schools and triggered capital works planning. The Creative Days in schools helped generate the normative and environmental conditions for user-ownership in the IHCs. The development of the SBIHC partnership and the specifications for IHCs then highlighted the extent to which the trial would inform the debate over which models of care were to be funded in Cornwall in future.

Evaluation Methodology

Approach, Purposes and Methods

By mid-2008, the SBIHC Steering Group (2008, 13 June-b) was clear about the approach and methods it wanted used to evaluate the trials of IHCs and contributions to the SBIHC project.

The methodology to be employed in order to elicit a deep understanding of Integrated Health Centres will be a case study approach. This will use a range of methods, which combined together, will provided a fairly comprehensive picture of how the project is functioning.

The preferred methods included benchmarking, trend analysis, regular reviews, and the use of quantitative and qualitative data, especially valuing the perceptions of children and young people. The IHCs were to be evaluated against the general expectations of IHCs that had remained virtually unchanged in the SBIHC since 2007 (SBIHC Project Group, 2007, 14 May) and as reiterated in 2009 (SBIHC Steering Group, 2009, 13 August, p. 1). They were expected to:

- Deliver a broadly based and cohesive range of services to children/young people in their school locality and in accordance with the area's identified need
- Ensure that its services complement and add value to the existing services for children and young people in the area surrounding each school
- Ensure that its services promote
 - The health and wellbeing needs of children and young people
 - The benefits of preventative medicine and preventative healthcare for the whole child
 - The principles of its stakeholders including the Duchy Health Charity, The Prince's Foundation for Integrated Health, Primary Care Trust and the Directorate of Services for Children, Young People and Families.

The second set of wider criteria specified for evaluating the project reflected potential national and international implications. The evaluation was to report on the extent to which IHCs and their host schools (CYPF, 2009, pp. 1, 2):

- Offer innovative and creative ways of delivering health and wellbeing care to young people that will have a positive impact on their education
- Gain commitment from key voluntary and public sector organisations
- Develop within the wider context of national and local youth policy. There is potential for the integrated health centres to make a significant contribution to the *Every Child Matters* agenda and make services accessible to young people across Cornwall

- Engage young people, their parents, teachers and the community to ensure services provided should be appropriate to local need and complement community based provision
- Enable young people to take ownership of the health centres and participate in the service design and building design
- Have a strong and central emphasis upon prevention. The aim is to support young people to help them make informed choices to improve and maintain their health and wellbeing
- Ensure that all resources are inclusive and accessible to all pupils including those with a disability or mental health condition. Consideration should be given to how young people not in education or those excluded from school could access any service. Also welcome is the opportunity to develop services that are accessible to the local community out of school hours in line with the Extended Services agenda, and
- Inform future projects across Cornwall and the UK.

Non-experimental descriptive case studies of the IHCs were reported annually to the Students Management Groups (SMGs) of the IHCs, to school leadership teams (SLTs) and to the SBIHC Steering Group to enable formative evaluation of the IHCs and summative evaluation of the project.

Evaluation Strategy and Framework

At the invitation of the Steering Group, the author proposed an evaluation strategy using case studies to apply evidence collected annually in the development of each IHC (formative evaluation), as well as evaluate outcomes at the end of three-year trials (summative evaluation) (Merriam, 1998; Stake, 1995; Stufflebeam & Shinkfield, 2007).

The draft evaluation strategy (Macpherson, 2009a) was modified in consultation with stakeholders and formally endorsed (Macpherson, 2009b). It used the “Most Pressing Health Issues” as categories to clarify indicators, data sources and collection methods (see Table 1), to be complemented by additional qualitative perspectives provided annually by the schools when interpreting progressive outcomes and negotiating collaborative case study reports to the SBIHC Steering Group.

Table 1: Evaluation framework: Health issues, indicators and data collection methods

Most pressing health issues for under 18s	Indicators	Data collection: Sources and method
Substance abuse	Drug and alcohol abuse	Cornwall Council data re <ul style="list-style-type: none"> • Exposure to drug and alcohol abuse
Sexual health	Teenage pregnancy rates Sexually transmitted infection rates Self management of sexual health	Cornwall Council data re <ul style="list-style-type: none"> • Conceptions and termination rates • Chlamydia tests and positivity rates • C Card Registrations for condoms
Mental health	Attitudes to self and school	Pupils Attitudes to Self and School (PASS) instrument which measures nine factors of student mental health (feelings about school, perceived learning capacity, self-regard, preparedness for learning, attitudes to teachers, general work ethic, confidence in learning, attitudes to attendance, and response to curriculum demands)

	Complex student needs	Team Around the Child (TAC) meetings Common Assessment Framework (CAF) meetings
Physical health	Body Mass Index Diet Exercise Health and Wellbeing	Health and Wellbeing Improvement Tool (HWIT), Healthy Schools Plus Programme
Health services	User friendliness of IHCs IHC use IHC users IHC operations	User Friendliness Survey (UFS) instrument developed from EEFO Mystery Shopper factors (access, atmosphere, confidentiality, staff, information and advice, ownership) Usage data from each IHC; footfall, new users, repeat users, access patterns Users' data from each IHC; age, gender, reason for use Each IHC's organisational arrangements and operational patterns
Lifestyle/ social issues	Exposure to crime, domestic violence and deprivation Engagement in crime Engagement in education Educational attainment	Cornwall Council data re <ul style="list-style-type: none"> • Exposure to crime, domestic violence and poverty • Youth offending rates Each school's attendance and exclusions data Standardised academic test data on English, Maths and Science

Data Collection

The collection of data to do with students' exposure to drug and alcohol abuse, crime, domestic violence and poverty, youth offending rates and sexual health outcomes required the coordinated production of data each year in Cornwall Council. A key team was formed and led by the Strategic Analyst Manager of the Community Safety Intelligence Team. It invented methods of reconciling differences between databases used by agencies and delivered data based on school catchments to inform the annual and formative evaluations made by senior staff in all three schools.

The team included a member of the Community Safety Intelligence Team specialising in youth justice and substance abuse in young people, the Strategic Coordinator of the Domestic Abuse and Sexual Violence unit, the Manager of the Youth Offending Service (YOS), formerly the Youth Offending Team (YOT), and the Team Leader of Yz-Up, the Young Persons Specialist Substance Abuse Service.

Data on students' exposure to poverty in the catchments was assembled by two Child Poverty Support Advisors of Cornwall Council, and was sustained despite this service being cut during the project and them being reassigned as Locality Manager - Camborne, Pool and Redruth, and as Service Delivery Manager of the Cornwall Works for Families Programme.

The data on students' sexual health in the three schools was generated and interpreted out of school, to sustain the confidentiality of in-school and local services, by the Commissioning Manager of the Teenage Pregnancy Services, later Access and Infrastructure Manager, Schools and Achievement Service. Academic progress data were provided by the Senior Statistician, Cornwall Council. CAFs data were provided by the CAFs Commissioning Manager of Children, Schools and Families. All of these Council officials made extraordinary and voluntary contributions to the SBIHC Project, in addition to their normal loads, primarily because they valued the approach being trialled to understand and improve student health and the SBIHC model of care.

Mental health measurement and education had not been part of the higher education or training of teachers in the three schools, except some delivering the PSHE curriculum. The use of the Pupil Attitudes to Self and School (PASS) instrument had been recommended by the Targeted Mental Health in Schools (TaMHS) Project (Department for Children Schools

and Families, 2008). Budehaven was one of 25 ‘pathfinder’ schools in the TaMHS project. The PASS was selected to monitor student mental health in the SBIHC Project by using universal baseline and annual surveys. One limitation emerged during the project. Tests for significant differences by factor were agreed in Year 1 with the PASS research support team, but this agreement dissolved when PASS delivery moved to a different corporate entity during the project.

The PASS measures students’ attitudes on nine scales; feelings about school, perceived learning capacity, self-regard, preparedness for learning, attitudes to teachers, general work ethic, confidence in learning, attitudes to attendance, and response to curriculum demands (W3 Insights, 2009). It is a 50-item and online survey that normally takes about up to 20 minutes to complete. Findings can be interpreted at individual, group and school levels. It provides an evidence-informed approach to raising achievement, improving attendance, reducing disaffection, screening to identify students at risk, including the ‘silent sufferers’, monitoring interventions, targeting resources, and evaluating outcomes.

The monitoring of ‘health and wellbeing’ proved problematic conceptually and technically. There were many definitions and diverse approaches proposed (eg.s Cornwall Children and Young People’s Partnership, 2007, 2008; Gray, 2009; Marks, Shah, & Westall, 2004). The National Healthy Schools Programme (NHSP) (Department of Health, 2005b) aimed to promote young people’s ‘wellbeing’ conceived as healthy behaviours, raised achievement, reduced health inequalities and higher social inclusion. This was of particular interest to the schools in the SBIHC Project given the potential multipliers indicated by a systematic review’s findings; that within- and beyond-school interventions tend to be more effective in terms of educational achievement than solely within-school interventions (Wells, et al., 2002).

The NHSP (Department of Health, 2009) offered a ‘Healthy Schools Enhancement’ process for schools wanting to go further into needs-led reductions in obesity (using the BMI), teenage pregnancies and melanomas, or to improve support for children in challenging circumstances. It also offered ‘Healthy Schools Plus’ (HS+) status for schools wanting to conduct and report annual reviews of health and wellbeing against national guidelines. Crucially, this benchmarking meant schools participating in an evidence-based and whole- and beyond-school approach intended to embed cultural change in families. The HS+ programme also funded support workers to help students, staff and parents to engage in the initial audit and development process. The process used 41 criteria in four areas; (1) personal, social and health education (including sex, relationship and drug education including alcohol, tobacco and substance abuse), (2) healthy eating, (3) physical activity, and (4) emotional health and well-being, including bullying.

The three schools with IHCs opted to achieve HS+ status, and to this end, agreed to conduct a baseline and annual repeat surveys using the HWIT, conduct annual reviews and modify the PSHE curriculum in ways that will enable young people to self-manage their health and wellbeing, including their weight and diet. Despite the withdrawal of the HWIT instrument as unreliable, all three schools went on to gain HS+ status. This provided a useful paper-based benchmark of status although it did raise questions about a methodology that

does without standardised data. Hence, each school selected unique indicators for their PSHE curriculum developments in general health and wellbeing.

Penair, for example, has just adopted the Self Help Independence Nutrition and Exercise (SHINE) program.⁴ It is a 12 week course of one theory session and one physical activity session per week, with before and after measures of BMI, waist, fat, systolic and diastolic blood pressure and peak flow, anxiety, depression and social esteem. It accepts referrals from GPs, schools, youth centres, acute centres, special needs units, counsellors, parents and young people who are considered Gillick competent. It engages parents and key school staff and informs teaching staff prior to recruitment. It has a relapse prevention programme over 18 months and an awards ceremony. Programme results to date show a statistically significant improvement in BMI z scores, waist circumference and fat percentage sustained for those who completed maintenance programmes for 18 months.

The collection of data on the user friendliness of each IHC was given early priority. Students from Budehaven and Hayle formed a working party with the author to convert the EEFO (2007) Mystery Shopper criteria (Mewton, 2007b) into an online, 33-item and six-factor User Friendliness Survey (UFS) instrument. It was trialled in Moodle software by Budehaven and Penair and in Frog in Hayle. Items and administrative, analytic and reporting protocols were standardised for universal and annual sampling.

Various problems were encountered with the administration of the UFS. A voluntary response regime in Budehaven led to unsatisfactory samples throughout the project. An administrator in Hayle added an item in one survey and deleted another. Data were not collected in Year 1 in Hayle on one factor; students' perceived capacity to affect the user-friendliness of the Crayon (a practical proxy for their sense of ownership). In Years 1 and 2 in Penair the responses by item were initially set at 'voluntary' as opposed to 'mandatory'. Corrections were achieved on discovery through emails and a Skype conference.

Most samples were found to be representative by year and gender. There was no indication of responder fatigue or that surveys of students' perceptions affected their willingness to use their IHCs. There was no statistical evidence for doubting the reliability of the instrument or the validity of the data it was used to collect. Once they had applied trustworthy data, most senior staff took the view that universal and annual screening using the UFS was essential to continuous improvement in the IHCs. To this end, they also agreed that it was important to guarantee the integrity of the UFS data by separating the line management of IHCs from their annual evaluation, and to provide professional development annually to standardise administration.

Data on the use, user and operations of the IHCs were collected using a database designed by one of the Co-Coodinators of the Bywva. It enabled easy data entry and standardised reporting by IHC coodinators. By late 2011, however, it was felt that attempts to automate this reporting were displacing service development. Penair decided instead to develop a 'sign in' process on a tablet to automate data compilation. The standard templates used to report

⁴ www.shinehealthacademy.org.uk

monthly to student management committees, and termly to school leadership teams, proved their practical value once trend analysis became possible.

The Common Assessment Framework (CAF) developed by the *Every Child Matters Programme* was selected to indicate the frequency of multi-disciplinary team meetings to evaluate the health needs and strengths of young people and their families, prior to planning interventions or making referrals. The data were published from 2009 in *Integrated Working Metrics for Cornwall* (Yeomans, 2009). Student's less complex needs only needing within-school interventions were addressed using Team Around the Child (TAC) meetings.

Site Selection

The draft project plan, the *Vision Document* (SBIHC Project Group, 2007, 14 May), explained that site selection would be based on three factors; student health needs as mapped by the CYPP, schools' capability to manage and maintain a health centre, and existing funding and services available in schools' catchment areas. Health needs were indicated using an index of multiple deprivation comprising income deprivation (22.5%), employment deprivation (22.5%), health deprivation and disability (13.5%), education skills and training deprivation (13.5%), barriers to housing and services (9.3%), crime (9.3%), and living environment deprivation (9.3%).⁵ This approach was further explicated in the *Programme Document* (SBIHC Project Group, 2007, 26 July).

At the first meeting of the Steering Group on 21 June 2007, two other site selection factors were endorsed, (a) the leadership contribution of Penair's head teacher, which resulted in the pre-selection of her school, and, at the request of Duchy Health, (b) a geographic spread across the Council (SBIHC Steering Group, 2007, 21 June). Budehaven's highly-gear application was accepted while Hayle's head teacher recalled that she was informed that her school had been selected. There was no evidence subsequently encountered that these selection processes affected schools' attitudes to inclusion or to the opportunities the project presented.

Categories of health indicators were also used to plan construction and integration. The *Project Initiation Document* (SBIHC Project Group, 2007, 26 September, p. 11) directed that the most common needs identified by the GPs' survey were to be addressed through counselling and other services to be housed on each site. These categories were slightly adjusted in the *Project Pack for Schools* which was designed to encourage curriculum, pedagogical and organisational development in schools, specifically in the areas of "sexual health and relationships, drugs and alcohol abuse, mental health, weight and diet, obesity, exercise, and aspiration and self-esteem." (SBIHC Project Group, 2007, 13 September, p. 5)⁶

These service categories were assumed by the Real Ideas Organisation (RIO) that was contracted to facilitate a 'Creative Day' in each of the three schools in July and October 2008

⁵ The needs criteria were taken from the Analysis of the Level of Social Deprivation within Secondary Schools in Cornwall based on the Lower Super Output Area (LSOA) Indices of Deprivation of 2004 and January 2006 PLASC Postcode Data. LSOA data were later aggregated by Cornwall Council staff into school catchment data for the purposes of this project.

⁶ Subsequent cuts to senior administrative staff at Cornwall Council saw the going of many members of the SBIHC Project Group, implying that such project initiation in future would require fresh capacity.

(SBIHC Steering Group, 2008, 13 June-a). The objectives of the Creative Days were to engage key partners in each school, allow stakeholders to explore the concept, operational guidelines and 'internal look' of a school-based IHC, and develop a 'creative blueprint' for each IHC.

A year later it was found that 'user-friendliness' and 'young people's engagement' had endured as key organisational features of the IHCs, and underpinned the RIO's continuing engagement in the Change Schools Project at all three Schools (Luxton, 2009a, 2009b, 2009c). RIO was also commissioned to run a 'visioning event' for representatives on 10 December 2009 to construct a common health, wellbeing and lifestyles policy for all three schools. By then the three IHCs had been formally opened and operating for some months.

Findings

Case Studies of The Haven, Budehaven Community School

The first case study (Barton, et al., 2010) of The Haven reported a strong and well publicised start in providing preventative health care to the school's wider community, through services and activities intended to inform students' choice making. Students were centrally involved in all developments, especially in the criteria-based selection of a mental health professional as coordinator. Although this person was line managed by the assistant head teacher, the PCT limited the appointment to one year due to budgetary constraints, insisted that the appointee also be clinically supervised by an NHS professional and that data collected on the NHS database had to be kept confidential to their employees.

The different definitions of line management and clinical supervision proved difficult to reconcile. The security conditions of the NHS database impaired the school's management and development of the IHC. Job insecurity led to the coordinator winning another permanent position in the NHS in August 2010. Since then the NHS-trained receptionist (later coordinator) and the assistant head teacher shared the management and development of The Haven with the headteacher and the Student Management Group (SMG).

The Haven adopted the IHC database developed in Bywva for recording operations. At the end of 2009-2010, Year 1 of the evaluation, it showed that The Haven had developed a broadly based and cohesive range of services to children and young people in the school's locality that cohered with the area's identified needs. Quantitative and qualitative data indicated moderate and appropriate levels of use, appropriate user profiles and effective operational management. Students serving on the SMG had a strong sense of ownership and a significant role in centre governance, management and development.

Budehaven and its IHC also developed the links needed to ensure that its services would complement and add value to existing services. There was also early and strong commitment to IPC by the head teacher. Baseline measures regarding general health and wellbeing, sexual health, academic achievement, attendance and exclusions were all made to indicate elapsed time differences. School professionals in The Haven, including the first coordinator and the Connexions careers advisor, hosted more visits than external professionals in Year 1, although this was strongly reversed in Year 2.

Satisfactory samples of mental health and user friendliness data, however, were not collected after the first coordinator's departure. The assistant head teacher continued to manage all aspects of safeguarding, including oversight of all multi-agency analysis and interventions, external agency relations and line management of The Haven, and took a personal position that was generally antagonistic to the collection and application of empirical data. There was also some uncertainty in Year 1 about how to reconcile the incoming Coalition Government's desire to cut public expenditure with their expectation that schools would continue to safeguard students and ensure their academic progress. One general upshot was that there was little integration of health data into the School's information systems that had been designed to make professional decisions regarding educational progress.

It was recommended at the end of Year 1 that Budehaven and The Haven (a) take the lead in capacity building in IPC, (b) strategize for sustainability, (c) collaborate in an inter-school review of IHC databases and reporting structures, (d) survey all students' perceptions of the user-friendliness of the IHC, (e) further develop the IHC's activities and services, (f) review future leadership needs, (g) complete PASS baseline surveying and formulate a mental health policy and strategy, (h) provide professional development on how to apply PASS data, new protocols for analysis and referrals, and integrated information and liaison systems, (i) sustain its substantive role as a sexual health care provider, (j) build partnerships with the YOT and Yz-Up, and (k) jointly develop poverty awareness training course with Hayle and Penair.

The second case study of The Haven (Barton, et al., 2011) found that all of the Year 1 recommendations had been attended to except those requiring the collection and application of mental health and user friendliness data or collaboration with senior staff in other schools. Reports by the coordinator presented convincing evidence of high levels of use, appropriate user profiles and responsive operational management. The Haven had doubled the student footfall through sustaining internal services and hosting a much wider array of relevant agencies. The external baselines and repeat measures of sexual health status, academic progress and exposure to crime, substance abuse, domestic violence and poverty all indicated no substantial change, although the highly value of the Brook services were not reflected in the sexual health data due to a 'ceiling' effect.

The greatest changes in Year 2 were to do with extending preventative health care into the wider community for children and young people, consistent with the principles of the project's stakeholders. During the year, a Co-location Building was built next to the IHC by a Council-led project, adding hot desks, a conference room, a meeting room and an interview room that were available for use by the end of the year. The Kevren has since housed professionals from a number of different health, welfare and educational agencies and charities. It extended interprofessional collaboration started in The Haven into the development of integrated health, welfare and educational services to a much wider community. The combined footfall doubled in Year 2.

Budehaven and The Haven added to their contribution to the SBIHC Project in most areas. The only area of uncertainty was to do with how innovative and creative health care in the area was impacting on students' educational progress. The continuing absence of data about

changing perceptions of The Haven's user-friendliness and students' mental health status meant that these factors could not be related to academic progress. Other and compelling evidence of networking, resource acquisition and the growing number of hosted agencies indicated a growing commitment from key voluntary and public sector organisations and responsiveness to national policy changes.

Recommendations at the end of Year 2 referred to (a) adopting standard reporting templates, (b) reviewing the title of the SMG in the light of its composition, (c) customising induction and service marketing for each year cohort's culture and attitudes, (d) extending student engagement and ownership, (e) reviewing the SIMS to integrate health data in planning improvements to student progress, learning, leadership and professional development, (f) sustaining sexual health services, and (g) and (h) collaborating with other schools in the SBIHC Project to provide professional and curriculum development in domestic violence and poverty.

The third case study of The Haven (Barton, Brock, Dowling, Grove-White, & Macpherson, 2012) found that all of the eight recommendations made at the end of Year 2 had been implemented except those that required collaboration with other schools and those about collecting and applying universal UFS and PASS data.

Major advances in Year 3 were centred on the IHC and Co-Location buildings that had brought together a widening range of health and welfare professionals funded by the school, NHS, charities and Cornwall Council, testament to the networking capacities of Budehaven.

The IHC continued to be line managed and coordinated by the school, primarily using professional cooperation to respond to student and community demand with emergent evidence of interprofessional collaboration. It had continued to be successfully governed by students with school, community and provider representatives.

The footfall continued to rise steadily with about one quarter in Year 3 comprising visitors to the school. Academic achievement at Budehaven continued to track at or above the means of Cornwall and England with solely positive associations with the services provided by the IHC, the improvements in attendance and exclusions, and the sharp fall in student engagement with YOT.

By the end of Year 3, The Haven had developed a very wide and coherent suite of health and wellbeing services for the children and young people of the surrounding area, achieving the aims of IHCs, most especially those concerned with community outreach. Budehaven had also contributed in considerable part to the aims of the SBIHC Project as it moved towards a more evidence-based approach to improving professional practices and integrating services. A local medical practice initiated discussions about reconciling its services with those provided by The Haven and Kevren.

Summative recommendations referred to (a) further advancing IPC as a key indicator of integrated school-based health services, (b) linking footfall to the quality of transition, orientation and induction, (c) implementing the UFS, (d) separating responsibility for line management and evaluation of the IHC, (e) implementing the PASS to help screen student mental health, (f) developing its SIMS to integrate PASS data with academic progress data to plan interventions and school improvements, (g) reviewing evidence on the effectiveness of

restorative justice in UK schools, current student management policy and practices, and the links with YOS, (h) developing support for students in families that are vulnerable to poverty, and (i) relating measures of value added by the school to visits to the IHC and improvements to mental health.

Case Studies of the Crayon, Hayle Community School

The first case study of the Crayon in Hayle (Jackman, Macpherson, & Owen, 2010) confirmed its successful establishment, operational management by the deputy head teacher and the receptionist, full-time services by the medical welfare officer (a school nurse), and a preliminary suite of activities and services offered by some NHS, voluntary and Cornwall Council professionals. The deputy head was supported by an assistant head teacher in pastoral matters and networking with external agencies.

A great deal was done in Year 1 to design integrated health services. The use, users and operations of the IHC were reported by the receptionist. Baseline and Year 1 measures of the mental and sexual health of Hayle students were taken and related by the School Leadership Team (SLT) to academic value added, attendance and exclusions, and to students' exposure to crime, drug and alcohol abuse and poverty.

A review considered the scale, scope and effectiveness of preventative primary health care services provided by the Crayon and their impact on the school's curriculum, pedagogy and educational outcomes. The modest array of services provided by the Crayon in Year 1 was yet to match the primary health needs of students in Hayle, let alone the children and young people of the school's wider area. On the other hand, many health services were being provided in other parts of the school, as were CAFs-related within- and beyond-school interventions. This suggested the need for organisational rationalisation. On the other hand, the fresh conversion of facilities and gradual engagement of additional professionals meant that a fresh approach could be embedded from the outset which emphasised prevention and supporting young people to make informed health choices. All resources were inclusive and accessible to all pupils at Hayle.

Students took ownership of the IHC early in the project. They were fully engaged in the planning, development, and management of the IHC. They had a strong hand in design and decoration. This engagement was formalised in governance and management structures with the sharing of ideas between the Student Management Committee (SMC), the IHC Management Committee and the SLT systematically documented. The Crayon was quickly regarded by students as 'user friendly' in terms of access, atmosphere, and the quality of information and advice provided, although a small number had concerns about feeling welcome and others were keen to develop the confidentiality policy, practices and poster.

The second case study of the Crayon (Jackman, Macpherson, & Owen, 2011) found that the responses to the recommendations made at the end of Year 1, along with other innovations, had created a turn round.

The greatest change was that the gradually widening scope of services increasingly matched identified student needs, as apparent in the growing student footfall. Another significant indicator of change was evidence-based organisational development across the

school. The database developed in Bywva to capture use, users and operations was adopted and the SMC and SLT in Hayle used the data to monitor and guide developments in the Crayon. They added students' perceptions from the UFS and health data from other internal surveys and Council sources to resolve issues and to determine appropriate future services.

This evidence-based professionalism in student health became the norm. The SLT focussed on acquiring generic Brook services to meet student needs, responded to trends in UFS data, especially those to do with student ownership, and carried through a successful internal rationalisation of professional and health care services across the school.

The effects were quite dramatic. Moving the Pupil Support Officer into the Crayon enabled her, the School Medical Welfare Officer and the Receptionist to reconstruct the reception, triage, CAF and referral systems, essentially through internal IPC. This also enabled a fresh focus on key purposes, such as prevention, and set fresh protocols for hosting agency and school personnel, integrating services and raising the quality of choice making by students. The confidentiality policy and practices were improved in Year 2 and added impetus to the turn round.

The surge in innovation and creativity in health care in Year 2 did not translate immediately into learning. The baseline and improved second measures of mental and sexual health appeared to be positively associated with students' improved perceptions of the user-friendliness of the IHC and curriculum developments intended to build primary health care capacity and improve student learning. The school's SMT became increasingly sensitive to the implications of fresh data flows about the mental and sexual health of students, as well as their exposure to crime, substance abuse, domestic violence and poverty.

The Government's funding cuts in 2010-2011 overlaid previous safeguarding responsibilities and highlighted the importance of encouraging fresh contributions by key voluntary and public sector organisations. The IHC had an advantage in this regard. Its incoming full-time and part-time staff had helped establish Hayle's regional and national reputation for pioneering the use of CAFs and TACs. They were open to engaging young people, their parents, teachers and the community to refine services and design interventions.

By the end of Year 2 Hayle had developed reliable data collection systems and a strong understanding of the perceived user-friendliness of the centre, students' academic progress and mental health status, as well as their students' exposure to adverse home and social conditions. Thirteen recommendations referred to; (a) participating in an inter-school review of IHC databases, (b) further capacity building in health information systems, (c) training in managing CAFs, (d) an inter-school workshop on confidentiality policy, practices and posters, (e) implementing UFS applications, (f) further developing the IHC's services, (g) instituting universal mental health screening and applications, (h) further developing the IHCs protocols, information systems and communications, (i) further developing access to services, (j) promoting the improved scale of sexual health services, (k) building partnerships with YOS and Yz-Up; and (l) collaborating in poverty awareness training.

The third case study of the Crayon (Jackman, Macpherson, & Owen, 2012) reported that all recommendations from Year 2 were implemented except those that required collaboration with the other schools in the SBIHC Project, confirming that in-school and local strategies

were more likely to be effective in the future. The doubling of footfall in Year 3 over previous years was due primarily to the increased recording of visits to the two full-time professionals, although nearly matched by the increased participation in activities offered by hosted agencies, until capacity was reached. The UFS data in Year 3 indicated that confidentiality and student ownership continued to require attention, with all other scores on EEFO factors remaining high.

The PASS mental health data in two cohorts showed a startling and across-the-board improvement over Years 1 to 3, pointing to the effectiveness of individual and group interventions delivered through the IHC, whole- and beyond-school interventions organised by senior staff and targeted professional development organised by an assistant head teacher. The net effects are evident in Tables 1 and 2 below, where a background colour of green indicates that a cohort's mean percentile score is in the most positive 80 per cent of the population compared with all of the UK, amber indicates that a mean percentile score is between 5 and 20 per cent and may be considered as being at "moderate risk", and red indicates that a percentile score is in the lowest 5 per cent and may be considered "highly at risk." The sample sizes show that the PASS had been adopted to screen student mental health.

Table 1: Year 7's PASS Profiles by Factor, 2009-2012, Hayle

Percentile scores of Hayle's Year 7 cohort 2009-2010 by PASS factor			
	Yr 7 2009-2010	Yr 8 2010-2011	Yr 9 2011-2012
Sample Size	94 (64.8%)	139 (99.3%)	140 (97.2%)
Factor 1 – Feelings about school	7.4	36.3	49.3
Factor 2 – Perceived Learning Capability	19.8	38.2	54.1
Factor 3 – Self-Regard as a Learner	74.2	77.3	62.6
Factor 4 – Preparedness for Learning	25.8	54.0	57.3
Factor 5 – Attitudes to teachers	5.00	34.5	64.0
Factor 6 – General work ethic	27.4	50.0	62.2
Factor 7 – Confidence in learning	25.8	42.1	60.2
Factor 8 – Attitudes to attendance	6.1	40.1	54.8
Factor 9 – Response to curriculum demands	69.2	40.1	65.3

1. Percentile score

Table 2: Year 9's PASS Profile by Factor, 2009-2012, Hayle

Percentile scores of Hayle's Year 9 cohort 2009-2010 by PASS factor			
	Yr 9 2009-2010	Yr 10 2010-2011	Yr 11 2011-2012
Sample Size	94 (64.8%)	118 (88.1%)	122 (89.1%)
Factor 1 – Feelings about school	15.9	17.1	30.4
Factor 2 – Perceived Learning Capability	8.1	13.6	42.1
Factor 3 – Self-Regard as a Learner	22.7	32.6	49.4
Factor 4 – Preparedness for Learning	18.4	18.4	48.1
Factor 5 – Attitudes to teachers	10.6	9.7	42.8
Factor 6 – General work ethic	17.1	6.1	44.5
Factor 7 – Confidence in learning	6.7	8.8	50.0
Factor 8 – Attitudes to attendance	10.6	14.7	39.5
Factor 9 – Response to curriculum demands	38.2	38.2	47.9

1. Percentile score

The development of sexual health services in the Crayon had two positive effects by the end of Year 3; the rates of conceptions and Chlamydia positivity remained close to or below Cornwall and national averages with C Card Registrations continuing to increase. Students were apparently more actively managing their sexual health.

The exposure of Hayle's students to crime, substance abuse and poverty changed little in the three years. There was a substantial drop in students' engagement with YOT, twice the rate seen in all Cornwall schools over the period; an issue addressed below. Academic achievement in the School continued to track at or slightly above the means of Cornwall and England with emergent evidence of a positive association between visiting the Crayon, improvements to mental health, and the value added to academic scores. Further, attendances at Hayle had improved and exclusions had stabilised.

In sum, the Crayon achieved almost all of the objectives of IHCs by the end of Year 3. It had broadened coherent services matching the area's identified needs, to the limits of its capacity. It had complemented and added value to the prior services for students at Hayle. It had promoted the health and wellbeing needs of young people with the benefits of preventative medicine and preventative healthcare consistent with the principles of its stakeholders. At the same time, the school had markedly improved its pedagogy, curriculum, evaluation and administrative structures by responding to health data. The Crayon and Hayle had linked the improvement of learning to support for the health and wellbeing of students through preventative measures; screening, mounting targeted responses, and offering integrated health support to students and their families.

The Crayon and Hayle remained acutely aware of the disadvantages faced by their students and responded appropriately to feedback and shifts in the policy context. They engaged students, their parents, teachers and the community to ensure the appropriateness of health services, and that they remained inclusive and accessible. With additional facilities, they have the experience to extend evidence-based health services to all children and young people in their area, perhaps in collaboration with their partner primary head teachers, and to inform future projects across Cornwall and the UK. The most important finding is the strong relationship found between student use of the Crayon and the substantial improvements in mental health, and the strong possibility that they are both related to the value added by the school to academic progress and the fall in engagement in the YOS.

The recommendations offered at the end of Year 3 referred to (a) relating footfall to transition, orientation and induction strategies, (b) capacity building through conversions, (c) informing management decisions with operations data, (e) asserting the school's student health policy by publishing new sexual health services, revised confidentiality policy and practices, and service outcomes, (f) asserting health data management policy and practices, (g) applying PASS data to pedagogy and curriculum using NICE materials, (h) requesting inclusion in the Healthy Relationships Programme, (i) reviewing the research on the effectiveness of restorative justice, student management practices and communications with YOS, (i) offering training in the Substance Abuse Screening Tool (SUST), (j) developing support for students in families that are vulnerable to poverty, and (k) relating the valued added to academic progress by IHC services.

Case studies of Bywva, Penair School

The first case study of Bywva at Penair (Bruford, et al., 2010) reported that the co-ordinators, a social worker and a person experienced in working with young people, and Penair had developed a preliminary suite of integrated services for children and young people that matched the needs of the area and added value to existing services. Students' presenting needs had also been used to refine services. The Bywva and the PSHE curriculum were together providing primary health care at Tier 1 and 2 levels, along with preventative health care in general health and wellbeing, and in sexual and mental health. The aim was to inform students' choice making and all services were inclusive and accessible.

Students continued to be closely involved in the management and governance of Bywva and preliminary UFS data showed that it was seen as user friendly by students on all six EEFO factors. There was strong and early development of innovative internal health information systems. Further, the baseline measures or indications of mental health, sexual health, physical health and wellbeing, attendance and exclusions, and academic achievement were used on receipt to review services.

Early impacts on educational progress in Penair were evident in Year 1. Curriculum developments focussed on building primary health care capacity with a view to informing student choice making. Pedagogical and pastoral arrangements were reviewed, particularly in the light of mental health data. There were also adjustments to organisation, leadership and priorities in response to the presence, purposes and emerging priorities of Bywva. It appeared that adding primary health care to Penair's purposes and establishing an IHC was having an accumulative and pervasive effect on the school.

Penair neither gained PCT funding for a weekly doctor's clinic nor was able to realign the services of the School Nurse to advance integrated services or IPC in Bywva. On the other hand, a range of NHS, charity and Cornwall Council personnel had volunteered to offer services through the IHC. Concluding recommendations referred to (a) further service development, (b) guaranteeing sustainability in a context of national turbulence, (c) training in CAFs management, (d) collaborating in an inter-school review of IHC databases, (e) instituting universal surveying with the UFS, (f) designing professional development and information systems related to mental health data, (g) building more effective partnerships with YOS and Yz-Up, and (h) joint training in poverty awareness.

The second case study of Bywva (Bruford, et al., 2011) found that all recommendations from Year 1 had been attended to except the requirement to collaborate with the other schools in the SBIHC Project on poverty awareness training. The UFS data indicated a continuing high level of perceived user friendliness, although a little off the peaks achieved in Year 1. The operational data showed that it was time to refresh the line management and entrepreneurial outreach of the Bywva, to refocus the priorities of the Co-Coodinators and boost the number of hosted agencies providing services relevant to the students.

There were further major developments on the School's information management systems, in Year 2, including the use of health status data during academic reviews and in curriculum, pedagogical and organisational improvements. Fresh questions were triggered about the IHC's role in TACs and CAFs, and the distribution of pastoral and safeguarding functions in the school. An urgent need emerged to engage voluntary and public service professionals who could help with beyond-school interventions to help students in families at risk. Community links and IPC were increasingly regarded as essential to the delivery of integrated and relevant health care that focussed on prevention and supporting young people to make informed choices.

The recommendations at the end of Year 2 referred to; (a) deriving Bywva's functions from operational data, (b) deriving Penair's safeguarding functions from interventions data, (c) integrating IHC and safeguarding functions, (d) mainstreaming the Brook provision, (e) negotiating doctor's clinics and school nurse services that cohered with the SBIHC model of

care, (f) advancing IPC and community links, (g) improving operational reports, (h) reconciling social networking with other activities at Bywva, (i) customising the confidentiality policy for each year cohort, (j) improving student perceptions of staff attitudes and information and advice, (k) using PASS data to help safeguard students, (l) professional development on data interpretation, (m) professional development to apply PASS data to the improvement of their teaching, and (n) collaborating with Budehaven and Hayle to share PASS data applications and the Health Fitness and Wellbeing Project, and mount joint workshops on domestic violence and poverty.

The third case study of Bywva (Finlay, Macpherson, & Vann, 2011) reported that all recommendations had been attended to except those that required collaboration between the project schools. It also reported a wide range of substantive changes including the negotiated separation of the Co-Coodinators. Safeguarding, pastoral and preventative healthcare functions had been integrated by realigning senior management roles and transferring three Lead Practitioners (one to coordinate) and three Pastoral Support Workers into the IHC. While individual, group, cohort and whole-school interventions continued to address on-going needs, these six appointments were intended to further boost beyond-school and family-centred interventions and attract additional partners and services.

Brook sexual health services were sustained although neither doctor's nor nurse's clinics could be negotiated that were consistent with integrated health care and IPC. The limit of the IHC's facilities were being reached with an array of drop ins, individual appointments and group activities, suggesting the need for co-located hot desks and meeting rooms. There were further health curriculum developments in PSHE; the Health, Fitness and Wellbeing Project, personal weight management programmes, and a modern Fitness Suite and a Trim Trail. The school's SIMS had fully embedded the analysis of student mental health into academic progress reviews, providing an integrated database used to inform individual, group, cohort, whole-school and beyond-school interventions, and curriculum, professional and organisational development.

The UFS data registered a slight dip in user friendliness, principally due to staff turnover, with levels remaining high. The continuing effectiveness of the sexual health services was shown by conception and Chlamydia positivity rates remaining close to or below Cornwall and national averages, and C Card Registrations steadily increasing. Penair students' exposure to crime, substance abuse and poverty remained moderate and reasonably constant. Academic achievement at Penair continued to track slightly above the means of Cornwall and England, consistent with improving attendance and exclusions data and steady across-the-board improvements in PASS mean percentile scores.

What had also changed significantly in Penair, as in Budehaven and Hayle, is that the number of students in their catchments engaged with the YOS has dropped at twice the rate of decline seen across Cornwall. Table 3 below shows the fall in numbers engaged and the rate per thousand in the three schools with IHCs and compares them to change to all secondary schools in Cornwall. Most of the changes have occurred in the last year.

Table 3: Young offenders engaged with the Cornwall and Isles of Scilly YOT/ YOS, 2008-2012

Catchment area	2008-2009		2009-2010		2010-2011		2011-2012		Change from Base		Change last 12 months	
	n	rate/K	n	rate/K	n	rate/K	n	rate/K	n	%	n	%
Penair School	28	12.7	18	8.2	32	14.6	17	7.8	-11	-39%	-15	-47%
Budehaven Community School	24	13.0	20	11.0	23	12.7	13	7.2	-11	-46%	-10	-43%
Hayle Community School	43	26.4	37	22.8	43	26.1	20	12.2	-23	-53%	-23	-53%
Total IHC areas	95	16.8	75	13.3	98	17.4	50	8.9	-45	-47%	-48	-49%
Cornwall and Isles of Scilly	891	17.3	756	14.8	792	15.7	579	11.6	-312	-35%	-213	-27%

Consultations with YOS police officers identified the positive effect of the IHCs, especially the increasing similarities between the TACs and CAFs-based interventions used in schools by IHCs, and the parallel methodology that the YOS officers use in cases where a quick and proportionate response is warranted to a young person's low-level offending, rather than defaulting to prosecution.

The YOS build a one-chance-only Youth Restorative Disposal (YRD) process around the young person, consult the victim(s), address the unacceptable behaviour and use cognitive behaviour and conflict resolution techniques to resolve matters. The YRD process coheres with the principles of restorative justice that have increasingly underpinned that the student behaviour management policies and practices used in all three schools. The so-called 4Rs of restorative justice in schools (Restorative Justice 4 Schools, 2008) emphasizes Respect (for everyone by listening to others' opinions and learning to value them), Responsibility (taking responsibility for your own actions), Repair (developing the skills within each school community so that its individual members have the necessary skills to identify solutions that repair harm and ensure behaviours are not repeated), and Re-Integration (working through a structured, supportive process that aims to solve the problem, allows young people to remain in mainstream education and reinforces their social inclusion to prevent recidivism). There are some anomalies in the schools regarding the use of social isolation, confinement and forced study during so-called 'internal exclusions.'

In sum, the Bywva had achieved almost all objectives set for the IHCs. It delivered a broad and cohesive range of services to young people matching their health needs in the area, albeit with limited reach to children. It helped add value to prior services—by helping to improve students' mental health, sexual health, physical health and wellbeing, attendance and exclusions, and academic achievement. It engaged appropriate professionals in responsive and preventative healthcare to promote health and wellbeing. It continued to realize the principles of its stakeholders concerning access, atmosphere, confidentiality, attitudes of staff and professionals, quality of information and advice, and student ownership.

Penair continued to make significant contributions to the SBIHC Project in the wider context of national and local youth policy making. It reorganised school organisation to better resolve the contradictions between safeguarding responsibilities and public expenditure cuts, the national policy switch from child-centred health care to family-centred integrated care, and the tensions between the regionally funded practitioner-centred model of health care and the school-based integrated model of care. It engaged young people, their parents, teachers and the community in the development, governance and management of the Bywva. It

sustained the responsiveness and appropriateness of services, maintained a strong tradition of student ownership, and emphasized prevention and supporting young people to make informed choices.

Concluding recommendations referred to (a) negotiating doctor's and nurse's services that cohere with a school-based and integrated model of care, (b) advancing IPC, (c) reinstating standard templates for reporting operations, (d) separating IHC line management from annual evaluation processes, (e) the new staff developing a one-year improvement plan for the Bywva, (f) investigating research projects in leadership and curriculum development in PSHE, (g) inclusion in the Healthy Relationships Programme, (h) reviewing research and experiences of restorative justice and links with YOS, (i) SUST training and other screening protocols, (j) developing support for students in families that are vulnerable to poverty, and (k) relating measures of value added by the school to IHC use and mental health improvements.

Looking back at capital costs, the fresh build of the Bywva cost about £323,000 while the conversions at Hayle and Budehaven each cost about £200,000. Operational costs annually for Bywva at Penair totalled about £30,000, including the costs of employing a Receptionist/Coordinator, not including part-time management by a senior school staff member and pupil welfare officer(s), with other full- and part-time professionals funded by the Cornwall Council, charities and the NHS. While these annual operational costs are typical of the other two centres, and about one fifth of the annual cost of treating an adolescent in Cornwall with bohemia, it is suggested below that the start-up capital costs in the pilot could be substantially reduced in the future.

Discussion

Nine themes regarding the SBIHC model of care were identified in the case study reports. They are discussed in turn and culminate in a conceptual model using an ecological approach (Frielick, 2004) to understand how IHCs function in context and learn to improve their services (Argyris, 1999; Senge, 1990).

The Relationships between Students and Health Care Professionals

Central to the effectiveness of all three IHCs was the quality of the relationship between students and those they met at the IHC, as perceived by students. The processes of transition, induction, reception, triage and subsequent interactions with professionals had to be experienced as welcoming, sympathetic and caring for the relationship to be sustained. Flourishing relationships were characterised by increasingly open and trustful disclosure by students and more sophisticated appreciations and intervention planning by professionals. The outcome, reciprocity in the relationship, appeared to be governed primarily by the growth of trust by the student. Effective relationships in this context were those where meanings about preventative health care were exchanged with fidelity between professional and student. The outcome, the integrity of meanings exchanged, appeared to be governed by the professional's appreciation of the student's capacity to learn how to self-manage their

health. The key problem here is that many health professionals are not educated or trained in co-designing learning activities with adolescents.

Students' Characteristics and Expectations

The adolescent students in the three cases appeared to have distinct characteristics and expectations that helped determine their perceptions and learning capacities. The UFS data provided many reminders of the extent to which student perceptions were based on personal experience and socially constructed beliefs in peer groups. They also confirmed that the EEFO factors about access to preferred services, welcoming atmosphere, confidentiality, quality staff, quality information and advice and ownership were regarded as essential criteria. It implied that student ownership of the IHCs was an expression of adolescents' desire to learn how to self-manage their health.

This implication coheres with knowledge of adolescent development (Maholmes & LoMonaco, 2010), especially how young people gradually integrate their personality, socialise into peer and adult cultures, and acquire valued knowledge, beliefs and skills needed for adult life. It is also a time of accelerated physical and cognitive growth, especially the capacity to think in abstract ways and make more reasoned decisions about options in life.

It was therefore appropriate that learning health self-management through informed choice making was considered an aim from the outset of the SBIHC Project. Achieving this aim was partially evident in students' engagement in the design and decoration of the IHCs, their participation in the selection of Coordinators and in management and governance, in collaboration with other stakeholders from the school, community and providers. The continued saliency of this aim for students was also seen in UFS responses that called for more opportunities to affect the user-friendliness of the IHCs. They are all proxy activities that indicate their maturing desire to learn how to self-manage the health of their bodies and their minds.

Professionals' Personal Beliefs and Goals

The UFS data illustrated how important professionals' personal beliefs and goals were to the quality of their relationships with students, as perceived by students. There were countless examples of exchanges of meaning that were enhanced or distorted by such perceptions. There were as many examples of how the integrity of these exchanges was moderated by professionals' judgements about students' capacities to self-manage their health. It appeared that these judgements backed up into a culture of practice and into medical and health science and ethics, but much more rarely into an appreciation of how adolescents learn.

Given the understandably diverse nature of medical and health care cultures (Helman, 2001), and the fragmented nature of health care experienced by students in Cornwall, it was appropriate that the SBIHC Project emphasised the need for integrated health care in the IHCs—to deliver coordinated, comprehensive and seamless provisions. Perversely, the absence of funded medical clinics in all three schools highlighted the need for interprofessional collaboration to the point where it was adopted as a policy of health care professionalism in Budehaven and Penair with strong indications that it will become so in

Hayle. As research advances into interprofessional collaboration in school-based and integrated health centres, a key issue will be how professionals reach collective judgments in ways that take students' capacities to learn health self-management into account. Professional judgment making in a SBIHC setting might move towards professional teams and students co-designing customised learning pathways to adult health, with appropriate scaffolding (Berk & Winsler, 1995).

Structuration of Services

A major determinant of the quality of relationships between students and professionals in the three IHCs was the way that integrated services were assembled, presented and experienced, including the services provided by part-time NHS, voluntary and Cornwall Council personnel. One indicator was about how individual students came to know, trust and engage with IHC services from transition activities, school orientation, and IHC induction, reception, triage and referral processes. Another indicator was about how more complex suites of in-school services were mobilised, such as referrals to collaborative analysis (e.g. TACs) and to sustained attention through student case loads. A third indicator was about organising CAFs that blended within- and beyond-school teams for multi-disciplinary analysis and interventions through family case loads.

Second order structuration processes (Giddens, 1984) were also seen that impacted the relationship between students and professionals. They included innovations in SIMS, curriculum, professional development and community outreach services that altered the conditions that sustained relationships. An early example was how the fresh flow of student mental health data dramatically altered how some teachers' responded to challenging behaviours; instead of defaulting to punishment for 'bad behaviour' they started considering methods that would help students better manage their 'inappropriate behaviour.' Another approach became very evident in Penair as collective analysis of student learning progress, especially when enhanced with empirical health data. A third example seen most clearly in Hayle was when PASS data were used to plan professional development for teachers. A fourth example was exemplified in Budehaven where outreach networking pioneered community health care services on an unprecedented scale. The structuration of services was, in turn, partially determined by inclusionary delivery modes and selection of services.

Delivery Modes

All three IHCs developed a 'drop in' service managed by their Receptionist to respond to immediate health needs. This service used seemingly casual triage protocols, with immediate follow up personal counselling if need be, individual appointments with counsellors and other specialists during lesson times, as well as activities offered by visiting personnel to respond to group needs.

In addition, all three schools used screening for safeguarding purposes which sometimes led to group and cohort interventions. Similarly, Hayle and Penair mobilised curriculum and professional developments to trigger whole-school improvements in pastoral care, pedagogy, and curriculum content. Budehaven and Hayle also made arrangements with specialists and

teams of professionals to extend the reach of their IHCs with beyond-school and family-centred interventions.

This flexible use of delivery modes points to a high degree of operational subsidiarity in all three IHCs. Subsidiarity, as an organisational principle, stresses decisions being made and acted on at the lowest level possible in order to minimise alienation and maximise ownership. It is derived from the Latin verb *subsidio* (to aid or help) implying that a school has a duty to support their IHC as the most immediate and competent point of health care delivery, particularly when characterised by IPC, within the terms of broader policy.

Selection of Services

The weight of references in the case studies to the need for doctor's and nurse's clinics, generic Brook sexual health advisory services and a broad array of general health and wellbeing and mental health provisions, pointed repeatedly to how each school's students, IHC and school leaders had reached a working consensus on the appropriate aggregation and reach of comprehensive health services.

This consensus appeared to be the basis for selecting, inviting and engaging normally part-time personnel funded by the school, the NHS, charities, and Cornwall Council, increasingly mindful of available facilities. It will be important for head teachers to take the lead in reconciling student engagement in IHC management and governance with representation from staff, parents and providers in ways that enhance both subsidiarity and IPC.

Intended Outcomes (Aims and Objectives)

As indicated above, the aims of the IHCs were (a) to deliver a broad and coherent range of services to the children/young people in each school area, according to identified needs and in ways that complemented and added value to existing services, (b) to promote health and wellbeing through preventative medicine and healthcare for the whole child, consistent with the principles of the stakeholders which stressed prevention and informed choice-making by students.

The findings above suggest that these aims have largely been achieved, with variations by school on scope of services, SIMS, reach to children in the school area, and related forms of school development, with a general deficit regarding medical healthcare. Common to all achievements associated with the IHCs have been the leadership of evidence-based structuration informed by new information flows about student health status. Central to all achievements in healthcare has been the development of relationships between students and professionals reflecting a shift in power from the latter to the former.

Together, the progressive development of healthcare structures and relationships over the three years provided evidence of substantial organisational learning. It appears in retrospect that the IHCs and their host schools were expected to be learning organisations from the time that preventative health care was added to the purposes of all three schools. Their learning was to be seen in improvements that were based on progressive student health assessments and evaluations of the IHCs, the last two components of this provisional theoretical model of school-based and integrated health care.

Student Health Assessments

A consistent theme throughout the project was that students' health assessments informed the development of relationships between students and professionals and the design and redesign of structures, such as interventions.

Despite the withdrawal of the HWIT, qualitative and quantitative data regarding general health and wellbeing continued to be collected for curriculum development in PSHE, most explicitly in Penair. All three schools came to adopt a policy of annual mental health screening using the PASS instrument, albeit with uneven implementation, in addition to prior methods used to monitor learning-related mental health.

The sexual health data provided by the Council was also monitored to identify needs, and in Hayle, to campaign for generic Brook services. Given the ceiling effect seen in sexual health data, it will be difficult to make major improvements in conception and STI rates. At the same time, the steadily rising numbers of the C-Card Registrations points to improving self-management of sexual health. Together these data are held to indicate the effectiveness of Brook services.

More broadly, the SBIHC Project has indicated that the general outcome of students' health assessments has been evidence-based and integrated healthcare and educational practices.

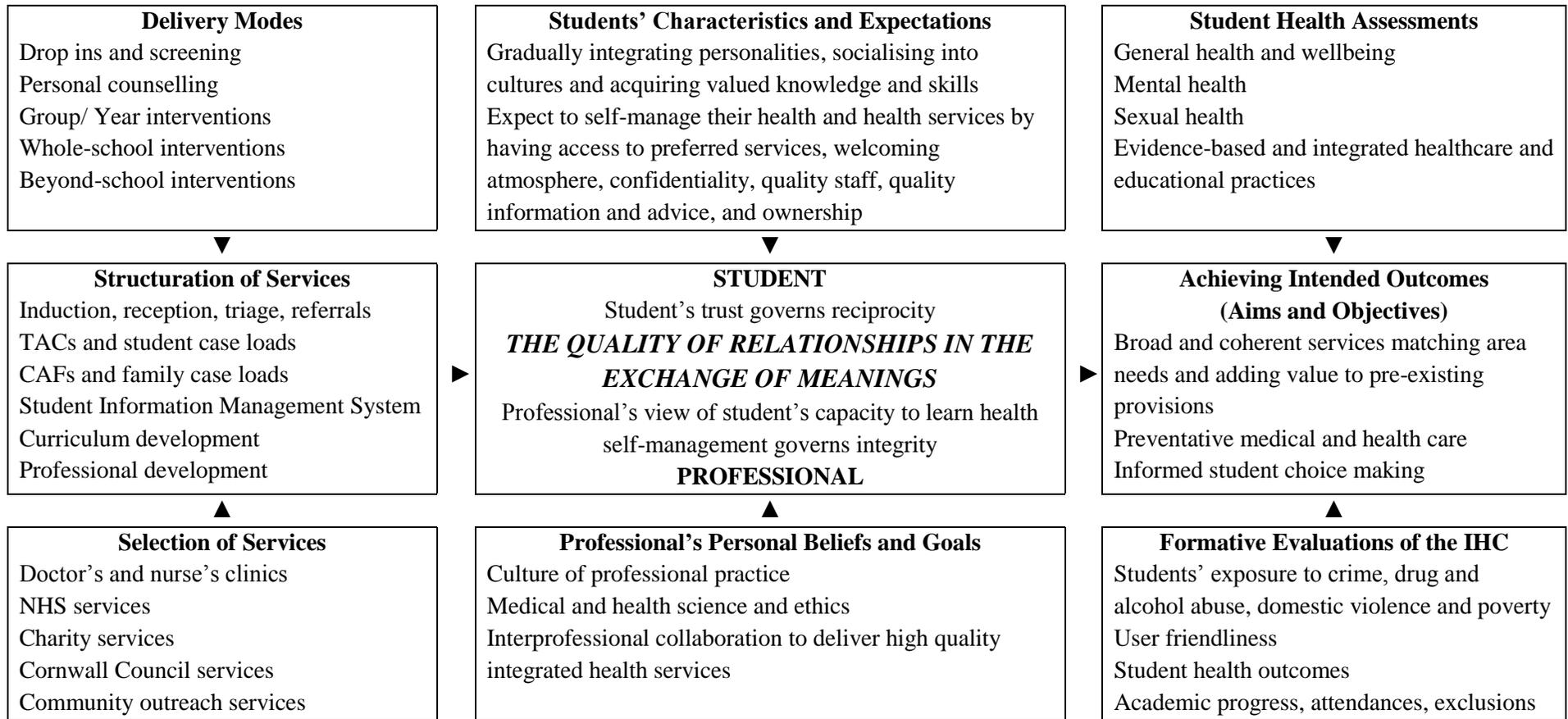
Formative Evaluations of the IHC

The final theme concerned the effects traceable to the formative evaluations commissioned by the SBIHC Project. Innovative data collection and processing in Cornwall Council resulted in schools gaining fresh understandings about how their students' health status related to their exposure to crime, drug and alcohol abuse, domestic violence and poverty. Making this knowledge available had relatively little effect during the project due to the discovered incapacity of the three schools to collaborate with each other, suggesting that local and regional initiatives are more likely to be successful. There are opportunities yet to be explored.

The effect of the UFS data was substantial and sustained, despite uneven implementation, indicating its capacity to provide feedback on factors considered essential by students and, as pointed out above, to guide organisational learning and development in each IHC. When UFS data were considered alongside progressive measures and indicators of student health outcomes and academic progress, attendances and exclusions, each of the three schools created a fresh strategic appreciation of the implications of adding integrated healthcare to the aims of schooling and possible futures for their IHC.

Finally, the nine themes appeared to be interdependent with patterns of causal influence, as indicated by the arrows (e.g. ►) in Figure 1.

Figure 1: A Preliminary Theoretical Model of a School-based Integrated Health Care Centre



Tentative Conclusions

Mindful of the limitations of the research methodology, these case study findings and their provisional interpretation suggest tentative practical, theoretical and research conclusions.

For those organising IHCs, it seems that students' familiarisation, perceptions of user-friendliness and engagement in management and governance of centres heavily influences the perceived legitimacy, relevance and effectiveness of services. It involves more than medical and health science and ethics. A key mediator of students' learning is the process of maturation in which adolescents give high priority to learning self-management. Effective professionalism in student health care will therefore involve co-designing learning activities with customised scaffolding.

It seems that effective IHC coordination primarily comprises induction, reception, triage, facilities management and networking in a context of IPC. The case studies give the impression that effective IHC line management is primarily about integrating needs-driven services, delivery modes and the structuration of services, with four aims in mind; evidence-based and caring relationships between student and professionals, preventative health care that promotes informed choice making, the development of IPC, and developing comprehensive area healthcare provisions for children and young people.

For head teachers and school communities planning an IHC, the case studies point to the importance of (a) consultations with school community stakeholders about an IHC's purposes, services and policies (especially about access, atmosphere, confidentiality, staff and professionals, information and advice, and ownership), (b) screening and monitoring students' health status in general and wellbeing, and in sexual and mental health terms and then relating them to academic progress, (c) monitoring students' exposure to crime, drug and alcohol abuse, domestic violence and poverty with a view to creating services that help ameliorate impediments to learning, (d) developing a SIMS to provide progressive and integrated intelligence for evidence-based practice and interventions, and (e) separating line management from student health assessment and annual evaluation.

Head teachers might also anticipate the strategic effects of (a) adding healthcare to the purposes of their school, (b) integrating the management of safeguarding, pastoral care and healthcare in the school's senior management and information management systems, and (c) designing roles and processes that respond to the patterns of identified needs in the school's area, ideally in collaboration with their partner primary school head teachers.

Two immediate implications for the SBIHC partnership is the need to agree the future direction of the SBIHC project and revitalise the Steering Group with a fresh mandate and membership. The Steering Group will then need a dissemination strategy that might identify regional and national opinion leaders and audiences, effective methods and appropriate objectives.

A developmental programme is recommended to the SBIHC partners with one objective; to establish more trial IHCs in Cornwall. It would offer expert peer support to head teachers wanting to develop an IHC. It would welcome Cornwall Council administrative support for the Steering Group to maintain the health data flows to project schools and facilitate inter-school networking. It would offer £4£ subsidies to a limit of £10,000 for converting spare

school space into IHCs with reception, clinical, hot desk, small group meeting and toilet facilities.

Five mandatory conditions for inclusion in a follow up programme were recommended: (1) student engagement in the design, management and governance of the IHC, with staff, governor and provider representation, (2) reporting universal and annual surveys of the user friendliness of IHCs, general health and wellbeing and student mental health to school stakeholders and the Steering Group, (3) obtaining from Council sources and reporting sexual health data as well as exposure to crime, drug and alcohol abuse, domestic violence and poverty, (4) developing a SIMS to integrate health information flows into school reviews, planning interventions and organisational developments, and (5) hosting NHS, charity and Council health and welfare professionals in a context of IPC and subsidiarity to address identified health needs in school areas. It would be particularly helpful if the successor to the PCT's commissioners, the Kernow Clinical Commissioning Group, were to fund weekly three-hour doctor's clinics and base school nurses in secondary school IHCs, and thereby service partner primary schools in catchments and advance IPC.

The need for further theory development concerning school-based and integrated health care was evident in the case studies and in the provisional model of school-based integrated health care offered above. The first area is how the services offered by an IHC impact on student learning. The detail will assist with the management of service structuration and relationships and the leadership of organisational learning. The second area is the backwash effect of having an IHC on site; how do IHCs affect the pedagogy, curriculum and organisation of schools? Finally is the need to better explain the role and leadership of IPC in school-based and integrated area health services.

The case studies also point to the need for further research. Two research questions follow to conclude this paper. What are the effect sizes of school-based integrated health services on student health and academic progress? What is the comparative effectiveness of the SBIHC model of care?

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