

Developing a Child and Youth Mental Health Service Website, Pitfalls and Practicalities: Project Managing in Cyberspace

Matthew Cartwright

Brett McDermott

Contact: Brett McDermott Brett.mcdermott@mater.org.au

Abstract

The internet and email are powerful ways of reaching young people and decreasing barriers in accessing mental health services. The following article reviews how one agency developed their own cyberspace presence to aid in the delivery of information and service to children and youth. Cost, quality, and management are all presented and highlight the practicalities involved in creating a youth internet presence.

Introduction

The internet is the fastest growing technology in the world. The internet and email are potentially powerful new ways of reaching young people and decreasing barriers in accessing mental health services (Cartwright, Gibbon, McDermott, & Bor, 2005). 79% of Australian households with children under the age of 15 have access to a computer with 59% having access to the internet (ABS, 2003a). In 2003, total Australian internet subscribers numbered over 5.2 million and continues to grow (ABS, 2003b). Worldwide it is estimated there are 729 million internet users (Global Reach, 2004). Recent data also suggests that health is one of the most common reason for using the Internet (Powell & Clarke, 2002). It is recognised that the Internet allows individuals a sense of control over their own health. In the area of mental health there has been a proliferation of information websites, self-help groups, web counselling services and professional mediated support groups. Some of these services demonstrate effectiveness in dealing with depression and other mental health disorders (Christensen, Griffiths, & Groves, 2003).

There is growing recognition of the importance of the Internet in public health and prevention messages and the improvement in mental health literacy. The potential effectiveness of health promotion and prevention information favourably compares with other media due to increased accessibility and relatively small cost. Transfer of information can be universal or targeted. The ability of the Internet to support databases that store information about users allows a regular and specific information exchange. Growth of the Internet has enormous potential for facilitating the development of mental health in the community and allowing mental health programs to be accessible to many who do not seek or cannot access professional treatment. (Christensen, Griffiths, & Groves, 2003). Examples of popular mental health portals include www.helpnet.com and www.psychcentral.com. This popularity is probably in part because the Internet provides a safe, non-threatening and anonymous medium to assist people access help and information (Yellowlees, 2001). However, mental health websites require more scientific evaluation to ensure quality of information (Griffiths, & Christensen, 2000).

The purpose of this chapter is to describe practical, organisational and project management considerations in developing a mental health website, the lessons learned, research findings, and discussion about future implications for using the internet in child and youth mental health.

Background to the "Kids in Mind" Website

The burden of child and youth mental ill-health is not insignificant. The Australian National Survey of Mental Health and Well-Being reported 14% of children

and young people in Australia have mental health problems of whom only 7% of young people who could benefit from a mental health intervention actually access a service (Sawyer, Kosky, Graetz, Arney, Zubrick, & Baghurst, 2000). Many youth do not access mental health services due to lack knowledge, fear and uncertainty (Urbis, Keys, & Young, 2003). Our own survey of youth and adult consumer perceptions and internet use found that accessing online information was considered a safe and acceptable way to promote understanding about mental health and local services and online information was likely to reduce feelings of isolation, increase levels of support, reduce anxieties and increase their willingness to access help (manuscript in preparation). This is consistent with research by Kids Helpline (2001) identifying mental health issues as the second highest reason for online counselling. Further, young people were three times more likely to make contact online than through telephone to discuss mental health issues (Kids Help Line Online, 2003).

The "Kids in Mind" website (www.kidsinmind.org.au) is the internet site of the Mater Child and Youth Mental Health Services (Mater CYMHS). Mater CYMHS is a large metropolitan service located in Brisbane, Queensland, with approximately 200 staff, servicing an estimated population of 415, 000, of which 124, 000 are aged (0-18) years. The service provides inpatient, day program, consultation-liaison and community clinic services. The service also manages a youth alcohol and substance residential withdrawal service and more specialised clinical initiatives such as an infant mental health team, multi-systemic therapy team and a research unit. Mater CYMHS has complex intersectoral relationships than many other clinical areas and include regular interactions with providers of education, welfare, disabilities, juvenile justice and primary health care.

Mater CYMHS leadership acknowledged child and youth mental health internet information is an area that required both development and evaluation. Most mental health sites are adult orientated and lack specific relevance to Australian youth. In 2000, Mater CYMHS had rapidly expanded introducing new services and programs. Organisationally, the need for improved communication had increased. Advances in technology, and the Internet provide potential solutions to meet the information needs of staff, referrers and consumers. The primary objectives of the "Kids in Mind" website was to link people to community services, enhance access in high risk and marginalised groups, enhance partnerships with key stakeholders, improve communication and to research the effectiveness of the website.

Website Design, Content and Branding

Designing the website involved consultation with consumers, staff and web designers. This process shaped content, layout, design, technical specifications and functionality. The overall look and feel of the site was crucial and constrained by organisational policies, technical skills, budget, time and target audience. The design aim was to achieve a consistent user experience (CUE) across all site sections. The CUE improves site navigation, searchability and encourages return site visits thus improving search engine ranking and the needs of the site user. The application of a

Content Management Systems (CMS) provided the backend structure to support the graphic design, CUE and site maintenance.

A CMS offers a sustainable and cost effective solution to maintaining and updating your own website. CMS are widely available and vary in cost. Owning the CMS liberates the organisation from the middle man allowing real-time changes to content. Kids in Mind operates a robust customisable CMS with a proven history of effectiveness in a large government department. Learning the system required minimal training, and can be managed from anywhere via the internet.

Navigating the site needed to be quick using a dial up modem. Speed was important when downloading content and opening web pages. Page scrolling was limited, clear menu pathways were structured and use of graphics were used appropriately

The graphic design was constrained by corporate branding. Graphic design and illustrations in the "Kids in Mind" website reflected the local community experience. The web design accommodates user groups such as children, youth, parents, staff, researchers, professionals and the community. The design layout promotes choice in searching the site from multiple sections. Use of illustration, multimedia, photos, art galleries, stories, games, newsletters resources, web links, frequently asked questions and contact information provides consumer choice. Interactive functions such as an opinion poll and e-mail feedback tool ensures consumers have the ability to make contact and receive information or be directed to help. The graphic elements were taken one-step further by ensuring that online designs and resources were suitable for use offline such as organisational publications, brochures, reports, posters and CD ROM. Using these assets reduced ongoing costs and promoted Kids in Mind as an organisation with a credible brand name.

Marketing and naming a website is crucial and in our case successful. It was important that the domain name (kidsinmind.org.au) reflected the business and keyword search terms used by internet users. Naming the website was consultative. The web address was submitted to numerous search engine directories and site linking with credible sites actively sought and reciprocal linking encouraged. Marketing the website has been successful with little resources and requiring minimal effort. The strategy included a ministerial launch, media releases, branding all verbal and written communication with the Kids in Mind brand-name and web address and advertising to key stakeholder groups. Maintaining a web presence has been enhanced by registering Kids in Mind as a registered business, advertising private programs and services such as Kids in Mind Training, Consulting and Kids in Mind Research.

Project Management

If you fail to plan, you plan to fail. Project management provided the platform for driving the change required. By definition, project management is the application of knowledge, skills, tools, and techniques to project activities in order to meet project requirements (Project Management Institute, 2000). The introduction of a service website involved change in perceptions, attitudes and communication.

Development of the "Kids in Mind" website was time-limited, involved numerous people, a moderate degree of uncertainty and was managed integrating best practice in project management. The project followed a typical project management approach and project lifecycle consisting of initiating, planning, executing, controlling and closing

phases. Within these phases functions such as: scope, quality, time, cost, communication, human resources, risk and procurement were managed and are discussed in more detail.

Website Scoping

Scoping the project was a considerable and lengthy task. Scoping processes include: initiation, planning, definition, verification, and change controls. The project was staged with the implementation phase requiring 6 months from acceptance of tender. Within the scope was: project management, partner selection, website content development, content management system and web design. Out of scope, without precluding topics for future projects, was provision of online medical advice, online assessment, counselling, treatment, in house hosting, provision for e-commerce, state-wide marketing, recruitment of ambassadors and publication of research.

The scoping process consisted of focus groups and of use of 4 surveys with staff and consumers. Free field and multiple response fixed data were obtained. The voluntary surveys involved newly registered clients and existing staff. The analysed data provided structure to the website design and its content. With limited experience and few similar service websites to guide our decisions managing the scope was a considerable risk. A close project team, constant reviews utilising web design consultants and a collaborative project plan assisted in preventing scope blow out.

Website Schedule Management

Designing websites depends greatly on your audience, your budget, time, the complexity of the design and the amount of content. The schedule was managed by applying processes such as activity definition, sequencing and duration, as well as estimating schedules and control measures. Achieving the objectives on time was critical in determining the websites success along with capability, cost and quality.

The website took nearly 2 years from its inception to go live. This project was constrained with a rapidly growing service and competing everyday service demands. Many healthcare projects are undertaken as operational work and this project was no different. As an NGO with financial constraints there were pressures on staff, however we were able to capitalise on staff motivation.

The most important scheduling tool was the human factor of estimating good time management and keeping people to schedules. Scheduled flexibility (project padding) was built into the project to account for our inexperience and unforseen organisational developments. Our organisation and the web designer used dedicated project managers to oversee the schedule. Microsoft Project 2002 software was used to schedule, analyse critical paths, outline milestones and control time. However, it was only a tool to aid work completion.

In developing website content the service utilised specialist staff, including a speech and language pathologist who checked language suitability for children. A web publishing editor was contracted for more editorial support. All content went through an extensive evaluation process. A set of web publishing guidelines were developed to

157

support staff. The guidelines were influenced by commercial and non-commercial web publishing guidelines accessible via the World Wide Web.

Website Cost

Website development and maintenance can be costly. Cost, always a major constraint was managed through resource planning, cost estimating, budgeting and control. A fixed budget was allocated for website set up and maintenance costs were absorbed into recurrent operational budgets. Limited web design expertise was balanced by infrastructure to support the development and maintenance. If the organisation does not have the expertise in developing websites this risk must be managed accordingly.

Managing the budget was a critical factor to success. The web designer provided opportunities to make progress payments and this was helpful. The fixed cost contract provided additional security. Major risks with information technology projects are that costs and time can easily exceed initial expectations. Actual project costs accounted for web designer fees and initial web hosting. Other organisational costs, such as project management, executive support and development of content were not tracked and were absorbed into operational budgets. Developing content in a large organisation is more cost effective than in a smaller organisation. True project costs would have been considerable. Tracking these costs in our circumstance was not required but nevertheless is important.

Making changes in the project has predictable budget implications: changes in the implementation and finalisation stages are expensive. This is where designers make considerable profit at the expense of poor planning and scope management. Negotiate the cost of scope change from the outset and be aware of maintenance contracts. The combination of designer and in-house approach provided a sustainable and positive cost benefit. The project was brought in on budget. A sustainability plan outlined provisions for ongoing financial funding through commercial, government, non-government and trust foundations.

Website Quality

Mater CYMHS is an accredited healthcare provider operating an internal quality management program. The website incorporated best practice guidelines, needs of stakeholders, policies, legislation and standards where relevant for the output of the project. Integral to quality planning, assurance and control of this project, measures were undertaken to ensure agreed expectations and standards compliance. Table 1 provides a summary of relevant standards and legislation. Recognised experts and professionals were utilised to measure and oversee compliance to the content evidence base, information technology and project management standards. Legal advice was sought to protect the organisation from claims made against the service.

Project quality was driven by consumer and staff expectations. Issues such as design and site usability, ease of navigation, speed of web page loading, cross browser compatibility, branding, consistent user experiences and simple clear information were deemed important. Accessibility, site feedback and contact details were also important site functions as well as having information written specifically for the intended audience.

Issues important in achieving a quality mental health website include managing change, organisational culture, stakeholder expectations, gaining consumer input, selecting the right partner and project team. Other relevant project issues include managing the schedule, risks, communication and human resources. The "Kids in Mind" website has been recognised with national and international awards underlining the benefits of the quality process.

Website Human Resource Management

Developing the website required acquisition, development, and management of human resources. The project involved change in attitudes, behaviours and has potential to impact future clinical care. Multidisciplinary and intersectoral teams contributed in varying ways. All staff were invited to participate. Professional development was provided to assist in implementation as well as accommodate changes throughout the project and to sustain the website following completion. This strategy was consultative, participative and addressed issues such as succession planning.

Team performance was critical to the websites success. Roles and responsibilities were clearly articulated and shared within and outside our organisation. Recruitment of external staff adhered to procurement constraints. Importantly, human resource management was about managing expectations, change, selecting and informing the right

people and ensuring that allocated work was done in time. This was an issue for those staff with operational responsibilities that had competing and higher priorities. Sustaining the project beyond the initial scope required the development of a website editing group to maintain the website.

Website Communication Management

Communicating and translating healthcare information to an external IT company presented considerable challenge. Communicating our vision into content, design and navigation was a developmental process. Communication provided a critical link between the project, people, ideas and information at all stages in the project.

A major communication aim was to translate our ideas and vision into a product that provided a long term solution. Extensive stakeholder consultation was crucial; matching their needs and translating this into specific website content required considerable effort.

A communication plan assisted the change required and ensured timely and appropriate generation, collection, dissemination and storage of project information. This occurred via formal structures and processes aiding decision making, and the control of informal communication networks to achieve the website objectives.

Building trust and a long-term relationship with the web designer was important for possible future partnerships. Key features of the communication plan included: a ministerial launch, media plan and advertising schedule, public relations and promotional

activities, budget, issues management, risk management, stakeholder communication, change approval process, reporting, HRM, procurement and quality management.

Working with an external partner was positive. This was assisted by their human services background, understanding of bureaucracy, the scope of this project and the fee for service structure. Choosing a partner that can translate technical jargon into plain English was most helpful. Typically, most large organisations experience difficulties in communication processes across business units and we were no exception.

Website Risk Management

Australian risk management guidelines in conjunction with policy, legislation and stakeholder input were applied to this project. We had limited organisational information technology assets and staff attitudes were varied. An overall assessment of the project risk was categorised as medium. Examples of risks included: raised service exposure and community expectations, increased referral demand, partner selection and dissonance, large scope and resources needed to achieve tasks, change and communication, usability of the website and its look and feel for each audience (children, youth, parents and carers, clinicians, researchers). Risks also included mismatch between expectations and delivered product from service and consumer perspective and the acquisition of robust and sustainable technology for maintenance and succession planning.

The main lesson to reduce risk is to clearly define the scope, choose the right web designer partner and manage risk continuously through consultation performance reporting and evaluation.

Website Procurement Management

Designing the website was constrained by typical contract management protocols. Based on a "make or buy" analysis a web designer and hosting company was procured. It was more economical to buy in expertise, than to develop the skills and host the website internally.

Web designer selection was undertaken through a closed tender process. Product demonstrations, weighted selection criteria, referee reports including their capability to provide future solutions to sustain potential growth were assessed. To assist this process and reduce risk an independent selection consultant was contracted. Performance monitoring was integrated throughout the project schedule.

The lessons learned in procurement throughout this project have been positive. We received more than we anticipated. This is probably unlikely to be the case in most situations. This project was unique and presented an opportunity to both organisations. Caution must be used if making changes to contracts. Consult your contract management team or lawyer. If you change your mind and need additional resources, this can be expensive and cause delays. Know the cost of changing the scope up front and beware of maintenance contracts, upgrade costs, and ongoing website hosting.

Procurement constraints between internal business units can be problematic. In hindsight, mitigating contract management and finance issues are likely to be helpful if procurement and finance departments are included in preliminary planning and discussions before going to tender. A greater understanding of procurement processes and partner-client business skills were lessons learned that had benefit beyond the life of the project. Caution must be used if making changes to contracts. Consult your contract

163

management team or lawyer. Establishing working relationships with your organisations contract management team or lawyer are advisable.

Website Evaluation

The project was evaluated against performance criteria and standards outlined in the project plan. The evaluation methodology included monitoring site traffic, multisite testing, cross browser testing, consumer and staff focus groups, consultations and meetings. Qualitative and quantitative consumer website feedback has been positive. In general, online feedback has been related to clinical or access issues. Staff feedback has also been positive, however, staff website use has been lower than consumer use. This in part is explained by site access difficulties experienced by non-campus community clinic staff. The website has been relatively free of downtime, with scheduled server maintenance conducted in low end-user periods. Data collection methods via the World Wide Web have limitations in terms of how statistical data is collected and analysed. Data from the web hosting company and CMS database have been analysed. Site traffic trends for the 12 month period 2003-2004 are outlined in Figure 1. Site usage has steadily increased with adolescent drug and alcohol withdrawal information being a highly accessed area.

The next stage of the website is to undertake more formal evaluation of consumer and staff use, site traffic trends, site feedback, cost effectiveness and impact on community awareness and access issues.

Discussion

Evidence suggests that consumers utilise online mental health information and access professionals via the internet. There is potential for providing high quality information to consumers and e-mail access to staff. Given that increasing numbers of Australians are accessing a more affordable internet using permanent broadband methods (NOftIE, 2003) this form of help seeking behaviour will potentially grow. Contemporary and emerging technologies include broadband connectivity to the home offering more advanced interactive services such as high speed videoconferencing, wireless communication technologies, voice over internet protocol, wireless technology and virtual reality. Consumer access to their electronic record is occurring in many countries. Assessment, consultations and treatment seem likely to continue in traditional face-toface modalities but may be augmented via the internet, and clinicians will have increasing access to health information via the internet (McLaren, Yellowlees, & Wootton, 2003). This is complimentary to workforce changes, investment into ongoing training of health workforce in technological advances, ongoing evaluation of health outcome potential and cost benefit of emerging technologies (A vision for the future, 2002). Further research into technology and mental health requires a stronger evidence base (McLaren, Yellowlees, & Wootton, 2003).

Developing and sustaining a mental health service website requires collaboration between consumers, services and inter-sectoral agencies. It is likely that many clinicians have more limited information technology skills, insufficient to neither build and maintain websites, nor have undergraduate courses adequately prepared clinicians to do this. However, health related courses do value the capacity of technology with more courses integrating technology into curriculum design and delivery. Other barriers include funding and cost constraints, ethical including privacy issues in the new cyberspace medium, staff attitudes, acceptance, fears and time to provide content and expertise, and the early state of evidence-based practice using new technologies. However, the benefits to the service and consumers seem clear with benefits in the broad areas of access improvement, greater access to information, improved communication and potentially improved mental health literacy and broader treatment options.

In conclusion, developing the "Kids in Mind" website has been positive for consumers and staff. This website provides a platform to support new service models targeting young people and carers in the future. The website provides a virtual front door for consumers and a forum for sharing information in a safe, accessible and cost effective environment. Considerable work is required to progress the development of internet child and youth mental health information and services. Such a project will usually extend the mental health service provider in areas of service organisation, legal and financial practise, areas that were previously either unnecessary or areas of relative weakness. Acquiring these skills provides benefits beyond the scope of a website development project. Considerable potential exists to improve youth access to mental health services using internet based technologies. Further research into the benefits of "Kids in Mind" website and other online mental health websites is required, including our current research into staff attitudes, behaviour and uptake of technology in clinical practice.

References

A vision for the future. (2002). Queensland Health, Smart State Health, 2020: p14

- Australian Bureau Statistics [ABS]. (2003a). Proportion of households with access to a computer, by type of household, income and broad region, Retrieval date April 14th 2004 from http://www.abs.gov.au/Ausstats/abs@.nsf/94713ad445ff1425ca25682000192af2/1ff46c75cd45f5ceca256d97002c8642!OpenDocument
- Australian Bureau Statistics [ABS]. (2003b). *Internet services: number of Internet service providers (ISPs), and access lines*, Retrieval date April 14th 2004 from http://www.abs.gov.au/Ausstats/abs%40.nsf/46d1bc47ac9d0c7bca256c470025ff8 7/24d08169c7867f2dca256d97002c8640!OpenDocument
- Cartwright, M., Gibbon, P., McDermott, B. M., & Bor, W. (2005). The use of email in a child and adolescent mental health service: are staff ready? *Journal of Telemedicine and Telecare* 2005;11:4 199-204.
- Christensen, H., Griffiths, K. M., & Groves, C. (2003). Chapter 15 in: Wootton R, Yellowlees P, McLaren P, eds. *Telepsychiatry and e-Mental Health*. London, UK: Royal Society of Medicine Press, 2003; 199-216.
- Global Reach (2004). *Global Internet Statistics (by Language)*, Retrieval date April 14th 2004 from http://global-reach.biz/globstats/index.php3
- Griffiths, K. M. & Christensen, H. (2000). The Internet and mental health literacy. *Australian and New Zealand Journal of Psychiatry* 2000; 34:975-979.
- Kids Help Line Online Counselling 2003 Info sheet No 27 Updated: January 2004
- McLaren, P., Yellowlees, P., & Wootton, R. (2003). Conclusion. Chapter 26 in: Wootton R,. Yellowlees P, McLaren P, eds. *Telepsychiatry and e-Mental Health*. London, UK: Royal Society of Medicine Press, 2003; 349-54.
- National Office for the Information Economy [NOftIE]. (2003). *The current state of play 2003: Online participation and activities*, Canberra: Author.
- Powell, J. & Clarke, A. (2002). The WWW of the World Wide Web: Who, What, and Why? Journal of Medical Internet Research 2002:4:E4
- Project Management Institute (2000). A Guide to the Project Management Body of Knowledge (PMBOK® Guide). Pennsylvania, USA.
- Sawyer, M. G., Kosky, R. J., Graetz, B. W., Arney, G. F., Zubrick, S. R., Baghurst, P. (2000). The National Survey of Mental Health and Wellbeing: The child and

adolescent component. Australian and New Zealand Journal of Psychiatry 2000 34:214-22.

- Urbis, Keys, & Young (2003). *National review of tele counselling and web counselling services: Final report*. Canberra: Australian Government Department of Health & Ageing.
- Yellowlees, P. (2001). Your guide to E-Health: third millennium medicine on the *Internet*, St. Lucia, Queensland: University of Queensland Press, 2001.

Tables and Figures

Table 1Quality standards and legislation^a

NOIE Guide to Minimum Website Standards 2003 Australian Government Information Management Office-Better Practice in Online Service Delivery Health Insite web publishing standards Health on the Net standards (HONcode) W3C standards for Federal and ACT Australian Communication Security Instructions-33 **Privacy Guidelines** Australian Government Locator Service (AGLS) E – permanence standard for electronic record keeping Australian/ New Zealand Risk Management Standards FaCS (ICT) Strategic plan 2000-2007 National Health Information Standards Plan for Australia 2001 Australian Council on Health Care Standards **Project Management Institute Standards** International Society of Mental Health Online (ISMHO) Mater CYMHS consumer needs analysis

^a References available on request

Figure 1 Hits per month by section over the first 12 months period of Kids in Mind being live.



Table 2 Session visits over the first 12 months period of Kids in Mind being live.

* Go Live

We														
bsit														
e														
CO mm														
unit	*Mo	Mon	Mon	Mont	Mon	Mon	Mon	Mon	Mon	Mon	Mon	Mon	Mon	Mon
v	nth	th	th	h	th	th	th	th	th	th	th	th	th	th
,	Jun	Jun	Jul		Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
	10,	30,	31,	Aug	31,	29,	30,	31,	31,	29,	31,	30,	31,	30,
	200	200	200	31,	200	200	200	200	200	200	200	200	200	200
	3	3	3	2003	3	3	3	3	4	4	4	4	4	4
Pub														
lic	= 0.4						133	136	105	150	224	199	202	194
Site	524	988	839	603	938	996	9	1	3	2	8	3	6	8
ria s	04	204	226	122	120	109	244	526	260	206	592	110	705	200
3 Vou	94	204	230	152	420	490	244	550	209	390	562	146	105	390
th	96	237	273	137	675	592	527	804	489	529	951	6	8	698
Par					0.0	001	01			020				
ent											102	157		
S	143	256	309	212	542	500	419	580	434	541	7	1	910	585
Ref														
erre												147		
rs	453	632	159	137	472	407	277	540	354	354	683	7	826	431
Res												450	110	
ear	402	666	221	261	511	577	509	626	501	550	296	152	119	796
Staf	402	000	321	201	511	577	508	020	501	009	200	107	3	700
f	391	783	543	258	473	473	459	574	363	606	238	3	829	684
Wh														
at's														
Ne														
w	134	282	152	80	136	605	186	309	275	478	858	959	778	648
AD									140	404	470	100	4.40	
AVV	101	GEE	202	247	054	725	002	111	112	124	1/6	198	146	051
3 Tot	404 272	000 470	202	247	904 512	730 538	003 476	0 645	<u>_</u>	621	863	4	978	901 712
al	1		4	2067	9	3	2	2	00	2	3	49	5/0	1
		5	-7	2007	5	5	-	-	J	-	5		5	