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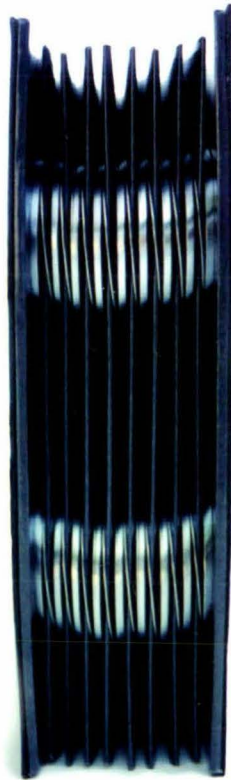
A

user-centred approach
to the design and
evaluation of a

P a t i e n t

I n f o r m a t i o n

M a n u a l



2000

Glenna Duthie

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to aid adolescent patients'
health care and healing

This Thesis Supports
a Practice-Based Research Project
for the fulfilment of a
Master of Design Degree
College of Design, Fine Arts and Music
Massey University, Wellington

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a b s t r a c t

In our current technological environment, designers are encouraged to identify, define and meet people's needs by undertaking user-centred research, working with experts in other fields, and by becoming 'producers' of their own designs. In this thesis the designer has taken on these roles to address information and communications issues in the health sector.

This research study seeks to improve the health care and healing processes of adolescent patients by a practical application of visual communications design. The research takes a holistic approach by considering the social, therapeutic, and creative needs of adolescent patients as they relate to the use of typography, illustration, colour, and packaging design. Information design, communications theory, and play therapy inform the approach taken.

Educational and recreational resources designed for adolescent patients are virtually non-existent in New Zealand hospitals. Instead, most of the information relating to the hospital services and the patients' conditions and treatment is communicated verbally by the hospital staff. This can disadvantage adolescent patients who tend to dislike communicating with people in positions of authority. Because adolescents have been found to be highly visually literate, adolescent patients needs can best be addressed by innovative visual communications design solutions.

The designer used both quantitative and qualitative research methods to investigate the complexity of adolescent patients' needs. Because the questionnaire survey of adolescent patients and the interviews with health professionals were conducted in hospitals in Auckland and Wellington, the designer was faced with the daunting task of getting approval from three separate ethics committees and from the related clinical boards before the research could be conducted. However the many administrators and hospital staff approached willingly gave their time to help ensure that the resulting design would be both appropriate and relevant.

With the research findings, the designer succeeded in developing a comprehensive communications system involving informative pamphlets, games, and activities that addressed the needs identified in the research. The designer also developed a packaging system that contained and displayed its contents in an appealing and innovative way. This thesis must be read in conjunction with the practice-based component of the research study described in chapter 5 (page 65-91).

Ongoing evaluations with health professionals and adolescent patients have suggested modifications to improve the design and have also confirmed that the resulting Patient Information Manual (PIM) is both highly appropriate and extremely helpful in addressing adolescent patients' needs. There has already been widespread interest and offers of support to help ensure that this design is available for use in public hospitals in New Zealand.

a c k n o w l e d g e m e n t s

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i n t r o d u c t i o n

1

Research in the field of adolescent patient's management over the last ten to fifteen years has indicated that the New Zealand public hospital system is not set up to adequately cater for adolescent patients' needs and expectations. New Zealand's small population has mitigated against the creation of adolescent wards and so adolescents are generally treated in children's or adult's wards, and by staff members who are not trained to respond to their developmental needs. In this situation adolescents are more likely to feel bored and alienated.

A Department of Health Report that explored the needs of these patients suggested that adolescents would benefit from the provision of 'recreational and educational support in hospital'.¹ These suggestions are echoed in the survey findings of Clendon et al which recommended that activities such as games and books be made available.² Recreational and educational support is currently available through Children's Teachers and Play Specialists in hospitals, but nearly all of the existing resources are designed for younger children and, to date, no provision has been made for adolescents as young as thirteen and fourteen who are sometimes placed on adult wards.³

Research indicates that the developmental issues of identity and independence tend to make adolescent patients' experience in hospital particularly problematic.⁴ Adolescent patients complain of boredom and are often unwilling or afraid to ask questions.⁵ This has resulted in adolescents earning a reputation for being difficult to care for as a proportion of them are 'uncommunicative', 'withdrawn' and 'non-compliant with treatment'.⁶ It would seem that these undesirable adolescent behaviours could be modified, and staff-patient communications could be improved, if adolescent patients felt that their needs were being addressed in hospital.

Adolescent patient needs can best be addressed by developing a resource that encourages adolescents to take an active interest in their treatment and recovery, facilitates staff-patient communications, and provides the patients with a means to relieve their boredom. In developing the Patient Information Manual (PIM), the emphasis has been on the design of a visual communication system that is readily accessible and user-friendly, and that contains relevant information, engaging activities, and good communications strategies designed specifically to appeal to this age group.

1 O'Regan, K. *Adolescent Health: Potential for Action*. Wellington: Department of Health, June 1992

2 Clendon, E et al. *Is Dunedin Hospital Suited to Adolescent Patients?* A Department of Preventative and Social Medicine Trainee Intern Health Care Evaluation Project. University of Otago, 1986

3 Children's Teacher Discussions in Wellington Hospital, 15/3/1997

4 Cain, W. *Theories of Development: Concepts and Applications*. 3rd ed. New Jersey: Simon and Schuster Co, 1992

5 Maskill, C. *A Health Profile of New Zealand Adolescents*, Wellington: Department of Health, 1991

6 Shenker, R. *Adolescent Medicine*. Harwood Academic Publishers: Switzerland, 1994

1.1 r e s e a r c h a i m

To design and evaluate a Patient Information Manual (PIM) that contributes to the health care and healing processes of adolescent patients.

1.2 q u e s t i o n s

What are the needs of hospitalised adolescent patients?

How well do existing resources for patients meet adolescent patients needs?

What formats, typography, illustration and colour are popular to an adolescent audience?

What content, forms and colours could be used to aid the patients emotional and physical healing processes?

As well as providing adolescent patients and hospital staff with a well designed communications system, this thesis will also demonstrate how a holistic, user-centred research process can inform innovative design solutions to meet the real needs of an institutionalised audience.

1.3 o v e r v i e w

Chapter 1 contains the introduction, research aims and expected outcomes.

Chapter 2 explores literature relating to designers as 'producers', user-centred design, and needs-based design. Followed by a description of adolescent patients, and an indepth analysis of their needs as they relate to communications, information, activities and expression.

Chapter 3 describes the methodologies used to conduct hospital staff interviews and an adolescent patient's survey to confirm and extend the findings of the literature review. This chapter also outlines the process of gaining approval to conduct this research in hospitals.

Chapter 4 contains the findings of the interviews and questionnaire survey, and outlines the design criteria.

Chapter 5 covers the development, design and evaluation of the packaging prototypes, pamphlets and activities (the PIM).

Chapter 6 contains the concluding statements and recommendations.

Chapter 7 the bibliography

Appendix extracts from the staff interviews and the patients' questionnaire