

GERM BUSTERS EARLY CHILDHOOD

EVALUATION REPORT

Southern Public Health
Unit Network



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IMPROVING HYGIENE IN YOUR CENTRE
A resource to integrate into your centre's daily program

EVALUATION REPORT

Southern Public Health Unit Network

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This report arose from an internship arrangement with the Gold Coast Public Health Unit (Health Promotion) and Bond University. Two Masters of Communication Management students, Ingunn Dahl and Laurenca Oliver, were engaged in an internship over a six week period. Their task was to provide recommendations to enhance and improve the *Germ Busters Early Childhood* Program.

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EXECUTIVE SUMMARY

The *Germ Busters* Early Childhood Hygiene Improvement Program was collaboratively designed for implementation in the early childhood setting. The Program was trialed on the Gold Coast and West Moreton regions of south-east Queensland during 1997/8. *Germ Busters* targets handwashing practice and technique to staff, parents and children of childcare centres, family day care, kindergartens and pre-schools.

The scope of this evaluation report is to present the quantitative and qualitative evaluation findings of the *Germ Busters* Early Childhood Program. Children's handwashing practice and technique was measured pre- and post-implementation of the Program using an observation tool devised according to the National Health and Medical Research Council's (NH&MRC) infection control guidelines for early childhood settings.

Observations were taken pre-intervention, immediately post-intervention to determine behaviour change and five weeks post-intervention as a measure of sustainability. Also knowledge, awareness and responsibility of hygiene issues of staff and parents/carers were evaluated, as well as staff's perception of the resource kit and implementation process.

Five selected events were identified for observation on the basis of their importance in communicable disease control and include: entry to child care centre, after toilet, before food, after play and upon exit from the centre. Differences in handwashing practice (frequency and at key events) and in handwashing technique (surfaces, duration, soap usage and drying) between the three observation points were analysed.

Quantitative analysis has shown the program to be effective in achieving sustained improvements in handwashing technique, frequency and duration at key handwashing events. The percentage of children washing their hands at three of the five key hygiene events increased significantly between pre- and five week post-intervention ($p < 0.001$). At pre-intervention, children's handwashing at the remaining two hygiene events, after toilet and before food, were already practiced by a high proportion of the children (65% and 96% respectively).

Handwashing technique improved significantly between pre- and five week post-Program implementation ($p < 0.001$). There were important changes in handwashing technique between the pre-intervention observation point and the five week post-intervention observation point.

More children were including the washing of the whole of their hands. Fingers included in washing increased by 10%, backs of hands by 23% and nails by 6%. Also more children used soap after intervention (14%) and drying improved after intervention by 16%. The duration of handwashing also improved by 12% above the recommended time of at least 20 seconds.

Extensive qualitative data collected from the centres coordinator evaluated the extent of use, effectiveness and strengths and weaknesses of selected Program features, resources and education activities. It also evaluated the level of support for the Program from staff, centre management and parents/carers.

The qualitative results indicated that the Program Manual was a valuable resource in providing a detailed explanation for the implementation of the *Germ Busters* Program. The handwashing education and sequence posters were effective resources for teaching and reminding children about correct handwashing technique at key handwashing events. While childcare staff felt a shared responsibility for teaching hygiene practice, they rarely liaise with parents on this issue.

These qualitative findings were used to guide further Program development. Overall, early childcare sector staff, management, parents and key childcare professionals (eg The Creche and Kindergarten Association) reviewed the Program in a highly favourable manner.

The evaluation of *Germ Busters* has shown that it is an effective resource in producing sustained behaviour change in children with respect to handwashing technique, frequency and duration at key handwashing events in early childhood settings.

RECOMMENDATIONS

Germ Busters has been shown to be an effective resource in producing sustained handwashing behaviour change with children. Therefore it is recommended that:

- *Germ Busters* be extended for statewide dissemination and implementation.
- An appropriate and cost-effective dissemination strategy be developed.
- A communication mechanism be developed to ensure full implementation and sustainability at the local and statewide level.
- The *Germ Busters* Program be strengthened by alignment with current legislative and accreditation frameworks.
- Supportive Environments for *Germ Busters* be integrated into child care legislative and licensing requirements. For example provision of basins, soap and towels at key infection transmission sites (entry and exit points).

- Findings from the qualitative analysis be used to redevelop the *Germ Busters* program to strengthen the resource. This would include:
- upgrading the resource manual to reflect a less formal and prescriptive approach to implementation allowing the centres to be more creative.
- encouraging implementation over the year by integrating *Germ Busters* into daily programs, policy and practice relevant to the individual centre's year.
- developing strategies to address the lack of participation by parents in the Program by highlighting the importance of hygiene in child health and enabling parents to take some responsibility for their child's hygiene practices.
- emphasising in the letter to parents the importance of good handwashing practices and presenting the letter in a easily reproducible format.
- presenting the handwashing grid in a more user-friendly format.
- strategically encouraging the use of the UV lightbox as it was recognised as the most effective resource but under-utilised.

INTRODUCTION

The *Germ Busters* Program aims to increase knowledge and skilling in correct hygiene practice – specifically handwashing – within the early childhood setting. The Program is a resource-intensive intervention designed to be integrated into the early childhood setting by staff, and reinforced within the home by parents/carers. The Program employs role modelling and social learning theories together with early childhood education principles. The primary target of the Program are children, with staff and parents/carers being the secondary target group.

The scope of this evaluation report is to analyse behaviour change with regard to children's handwashing behaviours prior to and after completion of the *Germ Busters* Program. The evaluation measures children's handwashing behaviours in early childhood settings prior to, immediately after, and five weeks after the implementation of the *Germ Busters* Program. An observation tool analysing the frequency, handwashing event, duration, and technique of children's handwashing was devised according to NH&MRC infection control guidelines for early childhood settings.

A series of child handwashing observations was conducted over a given time period to establish the above handwashing variables as baseline and to re-examine them post-intervention, and again five weeks post-intervention as a measure of sustainability.

During the development of the *Germ Busters* Program, two knowledge and awareness questionnaires to staff and to parents/carers were designed. These were included in the Program kit and were initially intended to provide a pre and post measure of knowledge and behaviour. A low response rate at pre-program prompted the Program evaluators to administer the tools at pre-program only rather than pre- and post-program as originally intended. This report will analyse some of the data pertaining to staff and parent/carers' perceived responsibility for children's hygiene development; and their perception of certain events as important handwashing times, as gleaned from these pre-program only questionnaires. The analysis of this data is intended to feed into recommendations for future program re-development.

A post-program only interview schedule to the director/staff regarding the resource kit components and implementation of the program was conducted. Data from this evaluation tool has been used to analyse the staff's usage of various parts of the program and their perceived effectiveness.

In conclusion the report will draw recommendations from the analysed data to provide feedback on the program's implementation and guide further program re-development.

BACKGROUND

AIM AND OBJECTIVES

The *Germ Busters* Early Childhood Intervention Program addresses the issue of hygiene behaviour development in early childhood, particularly in child care settings. The intervention aims for reduced risk of the spread of communicable diseases and illnesses within childcare settings through increased knowledge and skilling in correct hygiene practice – specifically hand washing.

The Program aims to change behaviour by resourcing and empowering people within the child care setting to make positive and informed changes with regard to hygiene practice and behaviour. The Program targets children, parents/carers, and staff within the childcare setting. It includes an integrated set of resources and activities designed to be implemented by the childcare staff, and reinforced in the home by parents/carers.

The objectives of *Germ Busters* are:

- to reduce the spread of communicable disease within the early childhood setting
- to enable children and their parents/carers to take some responsibility for centre hygiene
- to skill staff, parents and children in correct hygiene behaviours, especially correct hand washing technique
- to skill staff and parents as role models
- to create an hygienic child care environment
- to reinforce correct hygiene habits both within centres and at home

Key areas addressed by the Program include increased knowledge of the concept of germs and the spread of disease; correct hygiene practice and behaviour, especially hand washing technique; shared responsibility for young children's hygiene development by the children themselves, child care staff, and parents/carers; and the use of role modeling theory and social learning theory to harness young children's natural modes of learning, and reinforce correct hygiene habits in the child care setting and the home.

RATIONALE

A significant increase in Hepatitis A outbreaks in child care settings in the Brisbane South and Gold Coast areas¹, together with expressed consumer need from local child care centres and Community Child Health, prompted the development of a hygiene program specifically for the early childhood setting.

¹ Queensland Health Population Quarterly, Vol.2, No.2, April 1997.

The Program is informed by extensive research that proves links between effective handwashing and infection control in early childhood settings.² Findings from a recent Australian National University study further support this body of research and the underlying premise of the *Germ Busters* Program. The study has linked training of childcare staff in infection control behaviours with improved hygiene practices of both staff and children. Further, the staff training and resulting improvements in infection control practices were directly linked with reduced episodes of acute respiratory and diarrhoeal infection in the children.³

POLICY ENVIRONMENT

The Early Childhood *Germ Busters* Program supports the National Childcare Accreditation Council's (NCAC) principle standards relating to hygiene and infection control. Many of the updated infection control measures outlined by the NCAC are incorporated in the Program. It also directly relates to the *Guidelines for the Control of Infectious Diseases in Child Care* as developed by the National Health and Medical Research Council (NHMRC), and to Queensland Health's *Infection Control Guidelines*. The benchmarks for the program were devised from these recommendations together with evidence from Australian and overseas research citing proven links between handwashing and infection control.

PROGRAM SCOPE

The *Germ Busters* Program aims to skill adults in correct hygiene and handwashing behaviour, so that they may act as rolemodels to reinforce and maintain children's correct hygiene practice within the childcare setting and in the home. The promotion of positive reinforcement through the use of handwashing rolemodels is also considered in the Queensland Health Infection Control Guidelines.⁴ The *Germ Busters* Program encourages liaison between the centre staff and the parents/carers concerning children's hygiene behaviour. The adult roles are ones of involvement, direction and behaviour reinforcement through role modeling.

In scope, the Program does not directly aim to change childcare policy with regard to hygiene, but to support existing policy frameworks (accreditation and licensing) and effect positive changes in hygiene behaviour, which can be sustained and become habit in the longer term.

² Family Medicine (1997; 29(5); 336-339) *Hand Washing Rule Keeps Kids in School*. Paediatrics Supplement on Day Care Vol 94, No.6. *Hand Washing and Infection Control in Day-Care Centres. Infectious diseases in Children*, <http://www.kidscampaigns.org/Start/101childcare26.html> American Journal of Epidemiology, 1981. 113:445-451.

³ Roberts, L.A. et al; ***Infection Control Measures Reduce Diarrhoeal and Acute Respiratory Infections in Child Care***; The Australasian Society for Infectious Diseases Inc. Abstract of Annual Scientific Meeting 1999.

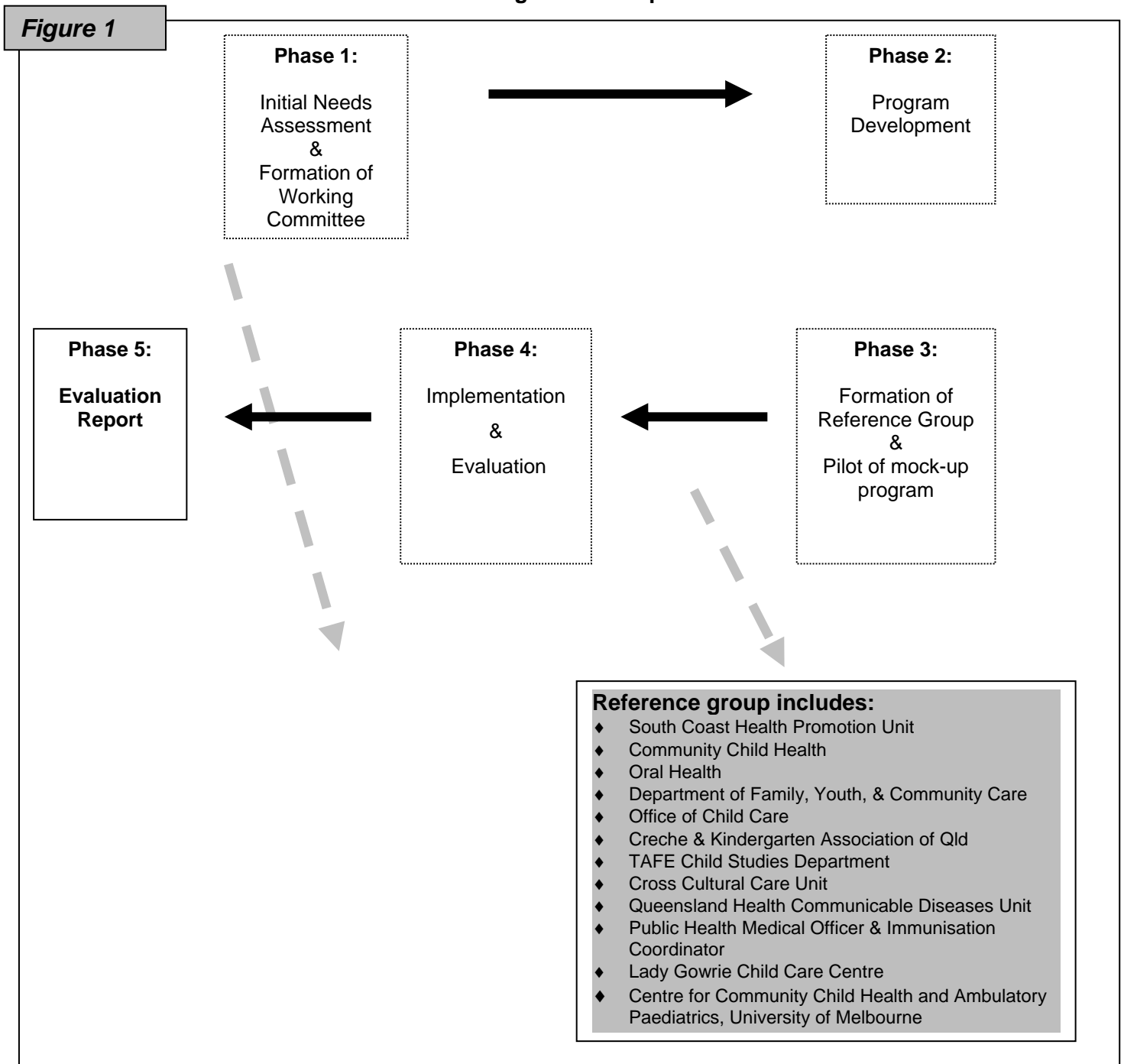
⁴ Infection Control Guidelines, Queensland Health, June 1999.

In this regard, the Early Childhood Program together with the Primary School *Germ Busters* Hygiene Program (developed in 1996) provides an integrated approach to children’s hygiene development. Although the underlying approach of each program differs, (the primary school program is based on peer education theory, and the early childhood program on role modeling theory, parent involvement, and social learning theory) the principles of effective handwashing and hygiene, and the *Germ Busters* characters used in the programs are consistent.

PROGRAM FORMATION

Figure 1 shows a graphical representation of the Program’s development.

Germ Busters Program Development Process



Phase 1: Initial Needs Analysis and Establishment of the Working Committee

Needs analysis among childcare centres formed the basis for the development of the *Germ Busters* Early Childhood Program. The Program was developed by the South Coast Public Health Unit (Health Promotion) in conjunction with a number of key stakeholders and six focus group child care centres on the Gold Coast who formed a working committee. The working committee included Community Child Health and Oral Health representatives. The six centres, selected as focus centres by Community Child Health, were comprised of kindergartens, long day cares, and occasional care centres. The working committee was integral to program development and implementation phases.

The six focus centres were actively involved in a consultative capacity throughout the development of the Program. Initially, as outlined below, they were involved in the needs assessment process (to generate concepts, issues and needs), and to gauge levels of hygiene behaviour knowledge and skills. In 1998 they piloted a mock-up of the proposed resources and activities prior to the final stage of development of the resource kit. The focus test centres were also heavily involved in the official launch of the Program and in devising distribution strategies for implementing the Program in other early childhood centres in late 1998. This report offers an evaluation of the implementation of the Program.

The South Coast Public Health Unit (Health Promotion) conducted the initial needs assessment process in 1997. It involved focus test groups, interviews and questionnaires with a sample of directors/group leaders, staff, parents, and children from each of the six centres.

Results of the needs assessment analysis indicated:

- (i) a need for increased knowledge of the correct and thorough hand washing procedure among group leaders, staff, parents, and children.
- (ii) child care centre staff cited that increased parent/carer responsibility for their child's hygiene behaviour development was required.
- (iii) parents/carers indicated that they required more education and information about hygiene issues.
- (iv) the children's understanding of the concept of germs and how they spread was found to be poor.

Centre directors and staff also advised on current levels of parent involvement, existing communication channels and resource content for the proposed program in these initial interviews and focus test groups.

Phase 2: Program Development

The development of the *Germ Busters* Program stemmed from the above mentioned needs analysis, supporting research and incidences of infection outbreak in childcare centres. The process was formulated in a comprehensive project plan at the outset of the development phase. The project plan included a study of the rationale behind the Program, details of the goal, performance indicators and targets. Data collection and analysis requirements were forecast, as were budgets, potential risks and barriers, monitoring and evaluation tools, and management strategies (Appendix 1). A service agreement was signed with Community Child Health as partners in the project. A sponsorship agreement was developed with Colgate-Palmolive Softwash who were also sponsors of the primary school program. In addition to the already established working group, key stakeholders were identified for inclusion in a reference group.

Phase 3: Reference Group Formation and Pilot

The reference group was formed in an advisory capacity during the program's development. The group included representatives from Queensland Health: South Coast Public Health Unit (Health Promotion), Community Child Health, Oral Health, Department of Family, Youth, and Community Care, Office of Child Care; and the Creche and Kindergarten Association of Queensland; TAFE Child Studies Department; and the Cross Cultural Child Care Unit. This group was consulted in an ongoing advisory role throughout the lengthy program development stage. Each stakeholder was invited to comment upon the mock-up pilot of the program and again on the completed program kit.

Once the development phase of the program was completed, the expertise of other key stakeholders was also sought to critically evaluate the program and resource kit prior to finalisation. These advisers included representatives from the Queensland Health: Communicable Disease Control, Public Health Medical Officer and Immunisation Nurse; the Lady Gowrie Child Care Centre; and the Centre for Community Child Health and Ambulatory Paediatrics, University of Melbourne.

Once the foundations of the program kit were eventually finalised, a mock-up was piloted in the focus test centres.

The mock-up program included the following components:

- *Germ Busters* education posters and story scripts for 2-3years and 3-5years.
- Hand washing sequence posters for each centre.
- *Germ Busters* song booklet; activities and suggestions.
- Adult resource manual including a task line.

- Handwashing grid to record each child's handwashing upon arrival and departure from the centre for a one week period. This scheduled hand washing was parent prompted and supervised.

On conclusion of the pilot, analysis found that the program resources and content were very well received by centre staff, parents, and children. The results of the handwashing grid exercise to track when and how often children were washing their hands upon arrival and departure from the centre was less encouraging. Parent involvement was then further earmarked as a challenge for the program to overcome. Interviews and questionnaires were conducted with the staff of the centres in effort to gauge initiatives to better define the role of the parent in the program and to increase their ability and willingness to be actively involved.

Phase 4: Implementation and Evaluation

Resources for the home were then further developed. The resource kit and program were modified, and consequently critiqued again by the key stakeholders prior to production for the implementation. The additional resources included:

- the letter to the parent from the Public Health Doctor in the resource manual
- the 'wash-eat-brush' lunch box sticker as a home reminder to parents
- the handwashing sequence posters for the home.

The Early Childhood *Germ Busters* Program was officially launched for implementation on the Gold Coast and in West Moreton in October 1998. An evaluation of the implementation in 38 early childhood settings was conducted and is the basis of this evaluation report.

PART A QUANTITATIVE SECTION

METHODOLOGY

DEFINITIONS USED THROUGHOUT EVALUATION REPORT

<i>Germ Busters</i> Program:	Refers to the resource kit contents and program implementation.
Evaluation Centres:	Early childhood centres that self-nominated to implement the program and participate in the evaluation.
Project coordinators:	A Public Health project coordinator in each of the two regions – West Moreton and Gold Coast - was responsible for liaising with centres throughout the program evaluation and conducting the children’s handwashing observations and interview schedules with director/staff member.
Positive hygiene behaviours:	Handwashing at key handwashing events, using the recommended handwashing technique, and soap and running water.
Handwashing frequency:	Number of hand washes observed.
Handwashing duration:	NH&MRC guidelines recommend a total duration of 20 seconds for washing, rinsing and drying. ⁵
Handwashing technique:	NH&MRC guidelines recommend washing palms, backs of hands, between fingers, and nails with running water and soap, rinsing and drying.
Key handwashing events:	NH&MRC recommended handwashing times for early childhood settings: <ol style="list-style-type: none">1) On arrival at centre2) After toilet3) Before food4) After play5) On departure from centre

⁵ NH&MRC (1997) *Staying Healthy in Child Care, Preventing Infectious Diseases in Child Care.*

SELECTION OF CENTRES

Separate program launches were used as a recruitment strategy in West Moreton and on the Gold Coast. All child care centres, kindergartens and preschools listed with Community Child Health and the Office of Child Care in the two target regions were invited to an information session and distribution of the program kits.

Of the 30 centres attending the launch in West Moreton, 14 self-nominated to implement the *Germ Busters* Program as part of the evaluation. Of the 200 centres attending the Gold Coast launch, 33 centres self-nominated for inclusion in the evaluation.

The evaluation centres in the South Coast and West Moreton were stratified according to location and randomly allocated to a constant key handwashing event for each of three observation times: pre-program, immediately post-program, and five weeks post-program. Thus, centres in each region were divided into samples for one of the five hand washing events: on entry; before eating; after toilet; after play; and on departure.

EVALUATION INSTRUMENTS AND IMPLEMENTATION

The evaluation instruments comprised three questionnaires and a series of three child handwashing behaviour observations.

Questionnaires

Three separate questionnaires were administered as part of the evaluation. Short descriptions of Questionnaire A, B and C are as follows:

Q.A	a pre-program questionnaire to director/staff to ascertain knowledge and responsibility for hygiene
Q.B	a pre-program questionnaire to parents/carers to ascertain knowledge of hygiene, frequency of child handwashing and parent involvement at the centre
Q.C	a post-program interview schedule questionnaire to director/staff

The *Germ Busters* Program resource manual incorporated master copies of the pre-program questionnaires to director/staff (Q.A) and parents/carers (Q.B) for duplication and dissemination (Appendices 2 and 3 respectively). The questionnaires required written responses to open-ended questions and scaled responses. The distribution and collection of questionnaires was the responsibility of each centre.

It was intended that these questionnaires be given pre-program and again post-program to form baseline and post intervention data regarding knowledge and awareness. Due to low response rates pre-program, a decision was made by the evaluators to only administer the questionnaires pre-program.

The post -program interview schedule questionnaire (Q.C) was prepared during the evaluation and administered to the director/staff by the project coordinator at five weeks post-program (*Appendix 4*). This questionnaire assessed the staff's perception of the resource kit and implementation process.

Child handwashing observations

The evaluation also included 3 observations of child handwashing behaviours at each centre:

• Observation 1 – pre-program.	Conducted prior to the commencement of the program.
• Observation 2 – post-program.	Conducted immediately post-program.
• Observation 3 – five weeks post-program.	Conducted five weeks after conclusion of program.

Each centre was randomly allocated to one of five hand washing events, and observations occurred in a given centre, for a given handwashing event, consistently over the three observation periods. Thus child handwashing frequency and technique was recorded in a particular centre at one of the five NH&MRC recommended handwashing events, pre-program, immediately post-program and five weeks post program.

A standardised observation checklist was prepared to record general details of the centre; the particular handwashing event; number of children under observation; children's age range; and structural details such as number of toilets and hand basins, provision of soap and towels (*Appendix 5*).

An accompanying standardised recording sheet (*Appendix 6*) was used to record particulars of each handwash that occurred during the given observation period ie handwashing event, technique and surfaces washed, duration, use of soap, and dry. NH&MRC guidelines for handwashing in child care settings informed the criteria for correct handwashing espoused by the program and used in the recording sheet tool.

The observation tools were used to capture behaviour change in child handwashing behaviours. Differences in handwashing practice (frequency and key event) and in handwashing technique (surfaces, duration, soap usage, and drying) were captured.

DATA COLLECTION

TIMELINE FOR EVALUATION

Suggested program timeline

The evaluation involved a ten week commitment from the participating centres. *Appendix 7* outlines the suggested steps of the Program.

Prior to the commencement of the Program, Observation 1 was to be conducted by the project coordinators. As suggested in the taskline located in the resource manual, over the following five weeks the questionnaires to ascertain hygiene knowledge and awareness of director/staff (Q.A) and parents/carers (Q.B) were distributed. The program was then introduced to staff and to parents/carers and appropriate information/education sessions held. The various child education activities undertaken by the centre were to be integrated into daily programs at the discretion of the centre.

The Program timeline suggested that its implementation should take five weeks. Observation 2 was to be conducted immediately post program after the five week implementation phase. A further five weeks later Observation 3 was to be carried out and the resource evaluation interview schedule questionnaire (Q.C) conducted with the director/staff at the same time.

Maintenance of program timelines

The maintenance of the suggested timeline was essential to the timely completion of the evaluation and was the responsibility of the two project coordinators. The timeline can be viewed in *Appendix 8*. Once the pre-program observation was completed, immediate commencement of the program in the centre was anticipated. If the timeline was met, the following observations and interview questionnaire could be done at five weeks and ten weeks respectively. The project coordinators were required to ensure continuing communication with the centres to maximise the maintenance of timelines and the completion of the program by all centres.

However, in practice, the maintenance of such a strict ten week timeline for evaluation purposes was not entirely workable for every centre. Some centres' time constraints and workloads precluded the strict adherence to the suggested timeline, although the continuity of program was maintained. The main deviation from the suggested timeline occurred between Observations 1 and 2. An approximate range of 3 – 13 weeks occurred between Observation 1 and 2.

Despite greater than anticipated time lapses during the evaluation all commencing centres completed the program.

CHILD HAND WASHING BEHAVIOUR

Observations of child hand washing behaviour were conducted at each centre at three time points: prior to the implementation of the program (pre-program Observation 1); immediately upon completion of the five week program (post-program Observation 2); and five weeks after completion of the program (five week post-program Observation 3).

Centres that had self-nominated to participate in the evaluation were contacted by telephone by the project coordinator to establish initial contact, and to arrange and re-confirm all three observation times. As part of the program, centres were asked to elect a contact person or *Germ Busters* coordinator for their centre. However, in most cases this was not carried out and the director or owner became the contact person.

It became necessary to adjust observation dates according to a particular centre's program commencement date. Some time lapses occurred between Observation 1, and the commencement date of the Program. Centres stated that this was due in most part to high staff turnover, ownership changes and workload.

Observations 1, 2, and 3 were conducted in each centre for the same hand washing event, on the same day of the week, at the same time of the day, for the same duration. A maximum of 1 hour was set for the observation period.

Given the differing types of early childhood centres participating in the evaluation (long day cares, kindergartens, preschools) it was not possible in this evaluation to analyse data on the basis of specific age groupings. Variations in age groupings existed between centres. Differentiation was not made according to type of centre or geographic locality in this evaluation. Neither was it within the parameters of the evaluation to analyse handwashing according to an individual child over the 3 observations, but rather to analyse number and quality of handwashes over the 3 observations.

Using the standardised recording sheet (*Appendix 6*), either the project coordinator at the South Coast or West Moreton Public Health Unit (Health Promotion) undertook all observations. While every effort was taken to maximise consistency of observation and recording of details, both between the centres and between observation periods, no intra or inter-observer reliability measures were ascertained. In order to minimise any potential bias introduced by the observer's presence, the observer remained as discreet as possible at the entrance to the centre toilet facilities.

KNOWLEDGE AND AWARENESS QUESTIONNAIRES

The centres were responsible for the dissemination and collection of director/staff and parent/carer questionnaires. The director/staff questionnaire (Q.A) was distributed as part of the resource kit during the implementation phase of the project. To maximise the response rate, the project coordinators personally followed up all questionnaires from directors. The response rate for the director/staff questionnaire was 65%. The number of these questionnaires returned from any individual centre varied from one to six, depending on the number of staff involved in the implementation of the program.

The parent/carer questionnaire (Q.B) was also included in the resource kit. Prior to the implementation of the *Germ Busters* program, the centres' *Germ Busters* coordinator was asked to copy and disseminate the questionnaire to parents/carers. Follow up procedures with individual parent/carers were the responsibility of the centres. The project coordinator in turn followed up responses from centres via phone calls and visits. A parent/carer questionnaire response rate of 21% was achieved with the combined follow up procedures. It was initially intended that the parent/carer questionnaires ascertain changes in knowledge following implementation of the program. However, as the questionnaires were returned throughout the program implementation period and the response rate was low, this questionnaire was used as a single measure of parent knowledge.

RESOURCE EVALUATION QUESTIONNAIRE

The resource evaluation questionnaire (Q.C) was completed at the same time as the five week post program observations. The questionnaire was conducted by interview of the centre *Germ Busters* coordinator by the project coordinator. One interview was completed at each centre in the study.

RESULTS AND DISCUSSION

ANALYSIS OF DATA

Analysis of data was undertaken in Microsoft Excel 97 and SPSS v9.01. Qualitative data was analysed thematically.

DESCRIPTION OF POPULATION

The study population was drawn from children attending selected participating childcare centres in the West Moreton and Gold Coast regions of south east Queensland. Children were aged between one and five years. Thirty-eight childcare centres implemented and completed the intervention program; of these 13 were located in West Moreton and 25 at the Gold Coast.

A total of 1290 child observations were made. The median number of observations per centre was 11 (range 2-25). The children were grouped according to age in varying cohorts in each centre eg 2-5 years, 15 months to 4 years, 3-5 years, 4-5 years.

CHILD HANDWASHING BEHAVIOUR

Five selected events were identified for observation of handwashing behaviours on the basis of their importance in communicable disease control. The percentage of children washing their hands at each of the five selected events increased over the study period (*Table 1*). A significant increase in the percentage of children who washed their hands at entry to the centre, after play and at exit from the centre was observed between the pre-program and five week post-program observations.

Good handwashing technique was defined by surfaces washed (palms, backs, fingers and nails), use of soap and drying of hands and duration of washing. A significant increase in the percentage of children who washed the back of their hands, fingers and nails during handwashing was observed between the pre-program and five- week post-program observations. In addition, significantly more children used soap during handwashing, dried their hands following washing and washed their hands for greater than 20 seconds, between the same observation points.

Number and percentage of children who washed hands at key hygiene events, technique used and duration of washing, pre and post *Germ Busters Early Childhood* program

Table 1	Pre-program (Q.A)	Immediate post-program (Q.B)	5 week post-program(Q.C)	Chi ² (p) df=1
Event	Number washed/ number observed (percentage)			
Entry	0/108 (0)	42/143 (29)	35/104 (34)	45.533 (<0.001)
After toilet	57/88 (65)	42/58 (72)	40/51 (78)	2.857 (0.091)
Before food	72/75 (96)	70/70 (100)	80/80 (100)	3.263 (0.071)
After play	92/123 (75)	81/82 (99)	107/107 (100)	31.168 (<0.001)
Exit	2/60 (3)	49/79 (62)	30/59 (51)	34.161 (<0.001)
TOTAL	226/457 (50)	284/432 (66)	292/401 (73)	
Technique: number of children observed handwashing	226	284	292	
Palms	205/226 (90.7)	263/284 (92.6)	268/292 (91.8)	0.031 (0.860)
Backs	39/226 (17.3)	154/284 (54.2)	117/292 (40.1)	30.911 (<0.001)
Fingers	45/226 (19.9)	113/284 (39.8)	93/292 (31.8)	9.004 (0.003)
Nails	2/226 (0.9)	26/284 (9.2)	17/292 (5.8)	8.705 (0.003)
Soap	158/226 (69.9)	245/284 (86.3)	246/292 (84.2)	13.963 (<0.001)
Dry	133/226 (58.8)	224/284 (78.9)	220/292 (75.3)	14.967 (<0.001)
Duration >20 sec	5/226 (2.2)	49/284 (17.3)	42/292 (14.4)	22.654 (<0.001)

* comparison between pre-program and 5 week post-program

HANDWASHING KNOWLEDGE AND AWARENESS

STAFF OF CHILDCARE CENTRES

Director/staff questionnaires (Q.A) were received from 19 of the 38 centres, with 61 questionnaires returned. Two thirds of staff indicated that they felt that childcare staff and parents were equally responsible for the teaching of hygiene practice. Twenty five percent of staff felt that it was primarily the responsibility of parents, while eight percent felt the childcare staff had the primary responsibility. Seventy five percent of childcare staff either never or sometimes liaise with parents in regard to how and when hand washing should take place and 25% of childcare staff often or always liaise on this key hygiene issue. Childcare staff clearly take an active role in handwashing with approximately 95% always or mostly supervising the children when handwashing. Less than 5% sometimes supervise and no staff declared they never supervise children when handwashing.

In summary, the results indicate that while childcare staff felt a responsibility to teach hygiene practice, they rarely liaise with parents on this issue. However when the children were at the centre they were supervised while handwashing.

PARENTS/CARERS

The response rate of the parent/carer questionnaire (Q.B) was 30%, with 439 questionnaires returned. Almost all (98%) parents/guardians regarded hand washing after their child used the toilet as very important (*Table 2*). In contrast, handwashing after eating was identified as very important by less than half the respondents (43%). Considering the other key handwashing times identified in the program, two-thirds of parents/guardians rarely or never wash their child's hands on entry or leaving the childcare centre with a further 24% sometimes washing at these times (*Table 3*). These latter responses are reflected in the child handwashing observed at centre entry and exit (see section 3).

Parent/guardians perceived importance of handwashing at defined times, expressed as percentage of total

Table 2

Event	Very important	Somewhat important	Unimportant
Before eating	84	15	1
After eating	43	48	9
After using the toilet	98	1	1
After being outside	64	33	3

Parent/guardian responses to questions of child's handwashing behaviours, expressed as percentage of total

Table 3

Handwashing behaviour	Most of the time	Some of the time	Rarely or never
Frequency of parent/guardian washing of child's hands when entering or leaving the centre	10	24	66
Frequency of child washing their hands without supervision at home	24	56	20
Child express the need to wash their hands without being prompted	26	62	12

More than three quarters (80%) of parents/guardians indicated children mostly or sometimes wash their hands at home without supervision. Similarly, 88% of parents/guardians reported children express the need to wash hands without prompting most or some of the time.

RESOURCE AND PROGRAM IMPLEMENTATION EVALUATION

The centre coordinator quantitatively and qualitatively evaluated the extent of use of selected program features and resources, the strengths and weaknesses of the program education activities and the level of support for the program from staff, centre management and parents/carers (Q.C). The response rate was 100%.

The staff and children's information sessions were implemented in almost all centres, and 68% of centres implemented parent/guardian information sessions (*Table 4*). Of the range of activities provided in the *Germ Busters* Program, the handwashing grid was most used with 61% of centres utilising this resource. The grid certificates were used to a similar extent, but not commonly used as a reward as suggested in the program. Although the handwashing grid was the most used program resource, it was identified as the least effective resource by a large number of program coordinators (*Table 5*). The reasons given for the ineffectiveness of the grid included the need for "a lot of teacher input", "difficult to be consistent", and that it was "a bit confusing". In contrast, the lightbox activity was the least used of the selected activities with 55% usage, but was identified as the most effective activity (27% of responses identified this resource). The lightbox was appreciated because it was "visual", "hands on", "children loved to see the 'tell tale' signs on hands", and because it had a "good impact on parents". Other resources that were perceived by staff to be most effective were, in decreasing order, songs, education sessions, colouring in and the handwashing grid (*Table 5*). The take home resources were generally perceived as attractive to children, with the stickers, crowns and posters perceived by staff to be of most interest to the children (*Figure 2*).

Proportion of centres implementing program features and resources

Table 4

Program feature or resource	Implementation (% of all centres)
Information session-staff	89
Information session- parent/guardian	68
Information session-children	92
Use of handwashing grid	61
Use of grid certificates –total	53
-used as rewards	26
Use of lightbox	55
Use of crown activity	58
Take home resources attractive to children	92
Prompting/teaching continuing	95
Program has changed handwashing practice or emphasis	79

Perceived effectiveness of selected program features and resources, expressed as a percentage of total responses

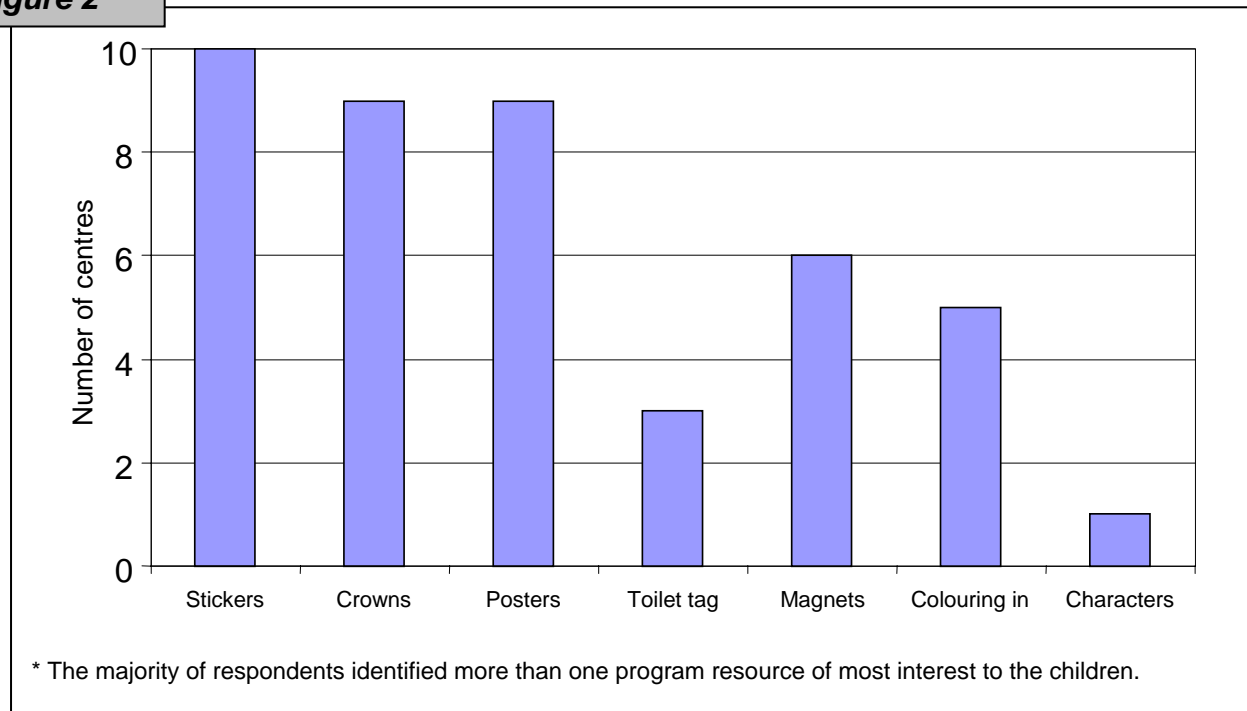
Table 5

Program feature or resource	Perceived as most effective activity*	Perceived as least effective activity*
Education sessions	16	0
Resources/activities involving parent/guardians	0	13
Colouring in activities	9	6
Handwashing grid	4	36
Lightbox	27	6
Songs, nursery rhymes	18	13
Washing on entry and exit	0	10
Other (posters, place mats, characters, hats, mobiles etc	27	16

* The majority of respondents identified more than one program resource as most or least effective activity

Number of program coordinators identified program resources as of most interest to the children*

Figure 2



The program was well supported by childcare centre staff and also by childcare management with 92% and 94% of centres respectively identifying the support as good. Consistent with findings, 95% of centres indicated continuation of the teaching and prompting of handwashing. Parent support for the program was noticeably lower than from staff, with 37% of centres identifying parent support to be good and over 60% of centres indicating minimal support from parents.

Detailed thematic analysis of the substantial qualitative information obtained from program coordinators was not undertaken, as that was not the primary focus of the evaluation. However in brief, of the 87% of centres which chose to comment on the program in response to the question, “Any comments?”, 73% of the comments were either wholeheartedly or mostly positive. Many were related to changed behaviours in staff and children as a consequence of the program. One comment indicated a fall in the number of infections compared to the usual frequency. Some comments related changes in hygiene resources and practice in the childcare centre. Childcare staff commented on the lack of participation of parents and the need to simplify the program, specifically indicating a preference for guidelines only rather than the perceived prescriptive approach in the program. There were also positive comments on the program and advice for improvements. The database of comments will be of particular value in follow up and further development of the intervention program. Examples of the range of comments are listed in *Appendix 9*.

LIMITATIONS

Throughout the report a number of limitations have been cited. These include:

- Given the differing types of early childhood centres participating in the evaluation – long day cares, kindergartens, preschools etc it was not possible to analyse data on the basis of specific age groupings. Variations in age groupings existed between centres.
- Differentiation was not made according to type of centre or geographic locality.
- It was beyond the scope of the evaluation to track a cohort of children over the three observations.
- No intra- or inter-observer reliability measures were put in place to assess consistency between the centres and the observation periods.
- It was initially intended that the parent/carer questionnaires (Q.B) ascertain changes in knowledge following implementation of the program. However, as the questionnaires were returned throughout the program implementation period instead of pre- and post program as intended and the response rate was low, this questionnaire was used as a single measure of parent knowledge at pre-program only.

CONCLUSION

Germ Busters targets handwashing practice and technique to staff, parents and children of childcare centres, family day care, kindergarten and pre-school. Children's handwashing behaviour, staff, parents/carer handwashing knowledge and awareness and the Program's features and resources were evaluated.

The *Germ Busters* Program shows to be an effective resource at improving handwashing technique, frequency and duration of washing at key handwashing events with children in early childhood settings.

Promoting correct hygiene practice in the early childhood setting can effectively help prevent the spread of communicable diseases within that setting as well as provide a foundation for better hygiene practices for children. When a health promotion program collaborates with a wide variety of key stakeholders from the outset, the program is more likely to give ownership of the program to the community and hence be more effective and sustainable.

PART B QUALITATIVE SECTION

METHODOLOGY

The aim was to gather data to enable appropriate recommendations to be made. Methods used were telephone interviews face-to-face interviews and mail out questionnaires. Two questionnaires were developed to contain open-ended questions about the distribution, implementation and sustainability of the Program. The questionnaires are attached as *Appendix A & B*.

TARGET MARKET

The main target market were directors, coordinators and staff who were involved in the implementation of the *Germ Busters Early Childhood Program*. The goal was to collect data from 10-12 of the 28 centres that had implemented the Program.

QUESTIONNAIRES

Two Questionnaires were used in gathering data in revising the *Germ Busters Early Childhood Program*. Questionnaire A (refer to *Appendix A*) was used in telephone interviews and in the face-to-face interviews and a more detailed section on vaccination and food safety.

PROCEDURE

The procedure used to gather data in the second evaluation¹ of the *Germ Busters Early Childhood Program* was through telephone interviews, face-to-face interviews and a mail-out. The Questionnaire was designed and pilot tested via telephone. The results of the pilot testing were positive in that the participants readily recalled the resources from the Kit-Program. Therefore, was decided that there was no need for conducting the interviews face-to-face.

TELEPHONE INTERVIEWS

Out of 28 centres, members of 15 centres were interviewed. Telephone interviews were conducted in 14 of these centres. Seven of these centres had high turnover, therefore many coordinators, group leaders of staff who were involved in the implementation of the program had left the centres.

One interview was conducted with a primary school teacher, who was not the primary target; the results of this interview were therefore not used in the evaluation. Another interview not included in the evaluation was incomplete due to the group leader's time constraints. The four remaining centres on the list were unavailable during the period the interviews were conducted.

¹ The first evaluation was carried out internally, however more information was needed in order to redistribute a new program effectively.

FACE-TO FACE INTERVIEW

One face-to-face interview was conducted out of the total 15 interviews. The interview was conducted at a child-care centre.

MAIL-OUT INTERVIEWS

Mail out interviews were distributed at a meeting where the Public Health Medical Officer (Dr Paul Van Buynder) held a presentation on the *Germ Busters Early Childhood Program* and incorporated demonstrations of hygiene behaviour. Thirty to forty mail-out interviews were distributed. Due to time constraints, the responses of these questionnaires will not be included in this report.

FINDINGS

The results from the telephone interviews and the face-to-face interview combined, provided data from 15 centres out of 28 centres.

QUALITATIVE DATA

The qualitative data has been divided into five key areas, which cover the main themes in the questionnaire. The areas contained in the ring binder manual include, parent involvement, hand washing grid, sequence poster, staff involvement, UV light box and overall sustainability of the Program.

THE RING BINDER MANUAL (QUESTIONS 2-5)

Participants' comments on the ring binder manual were positive in regard to the user friendliness (*Appendix C and D*) - in particular that the manual was excellent, self-explanatory and contained great detail. The ring binder manual was found to be user friendly, however there were some suggestions mentioned.

Some centres appreciated the detail while others thought it was daunting and could be off putting. Critical comments made about the manual included that it contained too much information, was too time consuming to navigate through, that it was "overkill" and a waste of paper. Some centres found the Kit to be too big and it was difficult to get an overview of what the kit contained.

All centres were positive about the format of the ring binder manual.

Findings in relation to the information and training given at the launch (Question 4, *Appendix C and D*) indicate that all centres that attended the launch were satisfied. The only negative view on the launch was: "*It was a PR exercise, and it was not that good*".

Suggestions about further training provided at the launch could include a step-by-step instruction about the Program and provision of a Program task line. Furthermore, there was a wish for more resources on hygiene.

Question 5 (suggested task line) asked if it was flexible and reasonable enough (*Appendix D*). Responses were mostly positive especially in respect to the fact that the centres could “*chop and change to suit the centre*”. A constructive criticism made in regard to the task line was that it was difficult to navigate.

INVOLVEMENT (QUESTIONS 13, 14, 15)

THE HANDWASHING GRID (QUESTIONS 18, 19, 20, 21)

Apparently all centres used some form of letter to parents. Some did not use the exact letter provided but modified it. The responses in Question 14 (parent involvement, *Appendix D*), were more detailed and in more depth. Some of the responses on how they encouraged parent involvement included:

- *“Showed the parents the posters in the centres”*
- *“Talked to the parents informally and individually about the importance of hand washing and how and why the Germ Busters Program was implemented”*
- *“Sending reminders, stickers and Germ Busters resources home”*
- *“Hand washing grid is the best way to involve parents”*

In Question 15 (improvement of parent involvement), responses of coordinators and group leaders yielded several helpful suggestions (*Appendix D*) such as:

- *“Send letters home and put tags on the children’s bags”*
- *“Talk to the parents on a parent night, so they would be more “keen” on doing the hand washing grid”*
- *“Have an information booklet parents can look at in the centre”*
- *“Invite a guest speaker from the Health Department”*

In regards to parent involvement, there was one special case in one of the centres interviewed. The centre had a number of positive comments about the parents’ involvement in their centre. However, there were some parents who were not involved in the Program and this upset parents who were actively involved. A parent committee was designed which issued to all the parents to get them involved in the handwashing grid. The committee also arranged a parent meeting in regards to the *Germ Busters* Program. The committee wishes to receive continuous information about the program.

In reference to the hand washing grid activity, Question 16 (*Appendix D*) 13 centres prepared and used the handwashing grid. Feedback included:

- *“Make it more VISUAL and BIGGER”*
- *“Have a blank sheet with the child’s name – this makes it more personal than just a number”*
- *“Use different symbols for the morning and evening”.*

SEQUENCE POSTER (QUESTIONS 18, 19,20,21)

STAFF (QUESTIONS 10, 11, 12)

Referring to Question 16, fourteen out of fifteen centres conducted the “Information Sequence Poster” exercise (*Appendix C and D*) with the children. This poster was referred to as an effective resource, however some comments and suggestions were made such as:

- *“Make it bigger and brighter”*
- *“Yes (it was an effective resource), but we made arrows from the wall to the sink to remind the children to wash their hands”*

There were a few comments made in regard to Question 11 (information session for staff) suggesting the main information session was a staff meeting or an informal discussion. Furthermore, in regard to Question 12 (information session for parents), again few formal meetings were conducted, rather, most centres had informal discussions or gave out information.

UV – LIGHT BOX (QUESTION 22)

With reference to Question 22 (UV – Light box), six out of 15 centres used the light box. The centres that used this activity found it beneficial and an effective method of hygiene education. One out of the six centres made their own. Nine centres claimed that they did not use it for various reasons such as:

- *“Time constraints, but would be great to try out”*
- *“Laziness”*
- *“Hard to access”*

SUSTAINABILITY (QUESTIONS 8, 9, 24, 25, 26)

In respect to Question 8 (barriers preventing to carry on with the program), all centres stated they continued using the program in regard to hand washing. Barriers mentioned were:

- *“Time constraints”*
- *“Had other ‘things’ on the (yearly) plan”*
- *“Problems retraining current and new staff”*

Proposals in maintaining the Program were given as Question 9, *Appendix D*:

- *“Information through mail as reminders so it doesn’t lapse, adults need reminders so they are getting used to it – intense in the beginning of the year”*
- *“Get attention to Germ Busters when the new children start”*
- *“It has to be ongoing”*
- one centre suggested: *“regular supply of magnets and take home resources”*

The last suggestion would not be a recommendation as it is not congruent with the *Germ Busters Early Childhood Program’s* aim of re-evaluation, which is to reduce the costs of the program. Responses to Question 24 (suggestions on ongoing information) were plentiful (*Appendix D*). The most common suggestion was to send information to both parents and staff. Information such as a newsletter, stickers, general information and publications on new studies was mentioned. In summary, any kind of information that would be supportive in sustaining the program would be appreciated. The publication most centres received (Question 25, *Appendix D*) was the ‘Gold Coast Kids’ (10 centres received it). Eleven centres claimed that these newspapers were available for both staff and parents.

QUANTITATIVE DATA

The collated data from the quantitative responses to the Questionnaire n=15 can be found in *Appendix C*. There were 18 items of the Questionnaire that were quantitative, these were Questions – 1, 2a, 2b, 2c, 3, 4, 10, 11, 12, 13, 16, 18, 18b, 19, 20, 21, 22 and 24.

Positive answers were given to all questions. Nineteen of these were phrased in the positive direction, while 7 were phrased in the negative direction. Responses to the negative phrased questions were positive when linguistically analysed. The Questions phrased in a negative direction were:

- 2a (User friendliness of the manual)
- 11 (Information session for staff)
- 13 (If the letter to parents was used)
- 22 (If UV-light box was used)
- 3 (Problems accessing photocopier)
- 12 (Information session for parents)
- 18b (If the posters were laminated)

In relation Question 2a (user friendliness of the manual), 11 centres said YES, that they found it user friendly and 3 centres did not find it user friendly. Centres that did not find it user friendly gave these comments:

- *“Could be off-putting”*
- *“Time consuming”*
- *“It has to be simplified”*

These comments are should be taken into account with the revision of the program.

Question 3 (problems accessing photocopier) was not a problem. In the collated responses the Question appeared to be a negative component, because of the negative phrasing of the question however, on analysis it was actually a positive component. All 15 centres had access to a photocopier. This indicated that photocopier resources in the manual were not a problem to distribute for the centres.

In reference to Question 11 (information session for parents), 11 centres reported they held an information session for staff and four did not. The majority of centres held staff meetings.

With reference to Question 12 (information session for parents), one centre held a formal information session whereas, 14 centres did not. However, they all had informal communication with the parents, such as: newsletters put up on information boards, letters sent home and informal verbal communication between staff and parents.

In respect to Question 13 (was the letter to parents used?), 10 centres stated they had used the letter while 5 centres claimed they had not. The four centres that had not used the exact letter in the Kit had modified it. Other reasons given for not using the letter were that they had their own letter head/format. One centre did not sent out a letter, the other centres sent the letter either in original form or modified.

With reference to Question 22 (UV- Light box), 6 centres used these while 9 centres did not. Of the centres that did use it, 5 of them borrowed the UV- Light box while 1 made its own. The majority claimed it was because of time constrains and one admitted to laziness.

One centre recommended using the UV-Light box to be implemented early in the program with a reminder at the end if they did not use it in the beginning. Hence, this inferred that this exercise should be made less optional so more centres would use it. Reasons for not using the box were stated to be:

- “Time constraints, but it would be great to try out”
- “Hard to access”.

In relation to Question 18b (were the posters laminated?), 7 centres laminated the posters while 7 did not. One centre could not recall. Lamination of posters increase their sustainability, thus it is a positive action for centres to laminate them. Lamination of the poster could therefore be recommended more strongly in the Revised Version if the goal is to maximise the “life span” of the poster.

VACCINATION AND FOOD HYGIENE

In regards to vaccination, Question A (audit of unvaccinated persons, *Appendix C*) the responses were mixed. Two said they already had conducted an audit and were aware who was and was not vaccinated. Six would like an audit, whereas six were not sure or not comfortable speaking for other staff members. They believed it was the staff’s and childcare attendee’s prerogative to get tested. Only one centre did not want an audit conducted.

Questions Vaccination B (information pamphlets to parents and staff) identified that 14 out of 15 centres would like to receive an information pamphlet. Thirteen out of fifteen centres affirmed they would like an education session about vaccines (Question vaccination C, education session about vaccines, *Appendix C*), whereas 2 centres were unsure. Only 5 out of 15 centres prepared meals at the centre (Question food hygiene A, *Appendix C*) and would be happy to receive a Questionnaire on Food Safety (Question food hygiene B, *Appendix C*).

The quantitative data indicated that feedback was in the affirmative. Items having a negative element in the table are actually positive when analysed. The results indicate that access to a photocopier was not an issue, hence resources, which need to be photocopied can be sustained in the Program.

Findings reveal that not all centres held an information session for staff but in all cases there was an information transfer – informal or formal. The most common information session held was a staff meeting; this could therefore be a suggested method on how to inform staff in the next program. The letter to parents was not used by every centre, however all centres distributed information to the parents about the *Germ Busters*.

Recommendations

The following recommendations are based on the findings of the interviews and are offered for consideration. It is advisable that these recommendations are taken into account:

1. ***Simplify the manual so it will be easier to navigate through – hence less time consuming to read.*** There were problems getting a general impression of the folder; therefore our suggestion is to make one sheet with an “executive overview” of the kit’s content.
2. Question 16 (hand washing grid) was an effective resource; all centres but two used it. It is therefore advised that the hand-washing grid stay in the program. Improvements suggested include making it larger and more visual.
3. One third of the centres modified the letter while ten centres used exact letter to parents provided in the ring binder manual (Question 13, *Appendix C and D*). It is advised that a letter to parents is provided in the kit, however it should be simplified, reduced to A4 size and in a more standard letter format, to make it easier to replicate.
4. To encourage, improve and sustain parents’ involvement (Question 14 and 15, *Appendix D*), information such as newsletter and reminders about *Germ Busters* should be distributed. Findings indicate that informal communication between staff and parents is the most common method used. Therefore, **informal communication is essential to enhance and encourage parents’ involvement in the program and should be recommended in the Kit.**
5. The sequence poster was successful and an effective resource (Question 18 and 21, *Appendix C and D*). **The sequence poster must therefore stay in the Kit.**
6. Centres stated that all staff were involved in the program (Question 10, *Appendix C*) and staff meetings were the favourable method used when Informing the staff about *Germ Busters* (Question 11, *Appendix D*). **Staff meetings are therefore a recommended procedure to inform the staff about the program.**
7. Research findings in regard to the information session for parents (Question 12, *Appendix C and D*) illustrate that informal communication was the preferred method for notifying and updating parents about the *Germ Busters* Early Childhood Program. **The proposal is to have an informal communication flow with parents rather than formal meetings.**

8. **Recommendations in relations to the UV-Light Box are that it should be implemented earlier in the task line (week one) and a reminder be issued later in the program (week three).** Providing South Coast Public Health unit regards the UV-Light box as a beneficial and effective method in teaching children about hygiene behaviour, it is advised that this procedure be retained.

OTHER RECOMMENDATIONS

On the basis of conducting the qualitative research including telephone interviews and face-to-face interviews we observed and noted two factors that were not mentioned in the Questionnaires.

A. There should be more specific focus on hand washing on arrival and departure.

This could be written more clearly in the current *Germ Busters* Kit. The importance of hand washing on arrival and departure should therefore be emphasised and explained in more detail in the new Kit. One comment was made in the face-to-face interview; the coordinator found it difficult to teach the children WHY they had to wash their hands when they could not SEE that their hands were dirty! This indicates a reason why this section could be included.

B. Make the letter to parents more specific and shorter. The letter should come to the point directly on the outbreaks and risks of different diseases that result from poor hand-washing practices.

CONCLUSION

The *Germ Busters Early Childhood* Program appears to have been very successful. In all centres surveyed they were still using the program some 18 months later. The centres found the Program useful, encouraging and worthwhile implementing.

The report has identified some areas where changes might improve the further use and development of the Program. These areas were:

- Manual
- Parent Involvement and Hand Washing Grid
- Sequence Poster and Staff
- UV-Light box
- Sustainability

We hope this report will be helpful in your future improvement and redistribution of the *Germ Busters Early Childhood* Program. We would like to thank the Department for the opportunity to work with such a worthwhile program.

APPENDICES

QUANTITATIVE SECTION APPENDICES

APPENDIX 1: GERM BUSTERS EARLY CHILDHOOD PROJECT PLAN

1.0 GERM BUSTERS EARLY CHILDHOOD PROJECT DEFINITION AND CONTEXT

1.1 Project Summary

Germ Busters Early Childhood intervention program will establish short, medium, and long term strategies to address the issue of hygiene behaviour development in early childhood - specifically in child care settings. The intervention aims for a reduced risk of the spread of communicable diseases and illnesses within child care settings through increased knowledge and skilling in correct hygiene practice and behaviour.

Germ Busters Early Childhood aims to change behaviour by resourcing and empowering people within the child care setting to make positive and informed changes with regard to hygiene practice and behaviour.

Germ Busters Early Childhood also contributes to the achievement of outcomes in areas relevant to the child care setting. The program reinforces and extends on hygiene concepts across a number of compatible programs; draws links with immunisation as an important factor in minimising the risk of spread of infection for children and staff within the child care setting; and directly relates to child care setting Principles of National Standards for Accreditation.

The program will target children, parents/carers, and staff within the child care setting. Key areas addressed by the program include the concept of germs and the spread of disease; correct hygiene practice and behaviour, especially hand washing technique; shared responsibility for young children's hygiene development by child care staff and parents/carers; and the use of role modeling theory and social learning theory to reinforce correct hygiene habits in the child care setting and in the home.

1.2 Related Health Status Outcomes

Germ Busters Early Childhood contributes to the longer term achievement of the following health status and infrastructure outcomes:

- Reduced transmission of communicable disease and illness within child care settings.
- Decreased incidence of communicable disease and illness such as gastrointestinal illness and respiratory illness within child care settings.
- Efficient partnerships with related stakeholders such as West Moreton Health Promotion Unit, Communicable Diseases Unit, Child Care Centres, Colgate Palmolive, Child Health, and the Office of Child Care.
- Links with compatible programs such as Immunisation; Oral Health; *Germ Busters* Primary School.

1.3 Project Rationale

1. Significant increase in hepatitis A notifications in Brisbane South and Gold Coast areas

- The majority of the 40 cases reported in the Brisbane South and Gold Coast areas in February 1997 were related to NSW hepatitis A outbreaks following consumption of raw Lake Wallis Oysters.

- Significant increase in cases during August and September 1996 due to an outbreak among several child care centres in the Logan area.
- Secondary cases of hepatitis A are likely following this outbreak.⁶

2. Links between hand washing and infection control

- A new study from Providence Hospital, Michigan, USA confirms results of similar hygiene studies which show that hand washing decreases the spread of infectious disease and illness. The study found significant reductions in the spread of infectious disease and illness, such as respiratory and gastrointestinal symptoms, among primary school children who followed a scheduled hand washing program. Reductions in school absenteeism due to infectious diseases/illnesses were attributed to scheduled hand washing. The study also posits the longer term benefits of scheduled hand washing in younger age groups so that the positive hygiene practice becomes habit into adulthood.⁷
- In 1993 the NSW Health Department established a Working Party to develop guidelines for infectious disease control in the child care setting. This was in response to the Children's Services Health and Safety Committee's concern for the incidence of infectious disease among children attending children's services and the potential problems for staff. High standards of hygiene were considered important in maintaining the health of children and the staff caring for them. Hand washing is cited as the single most effective method of preventing the spread of infections.⁸
- A health-education program implemented by Public Health in Canada has focused on hand washing technique to promote infection control in day-care centres. A combination of health interventions and educational activities were used in the program to train educators and children in the correct hand washing technique. Teaching resources such as songs, colouring books, etc, were used to promote the widespread use of correct hygiene procedures among the children. Evaluation of the 3 year program showed a continuous improvement of hand washing efficacy among both staff and children. Lower rates of gastrointestinal illness were directly related to degree of hand washing efficacy.⁹
- A study reported by the American Academy of Pediatrics cites crowding, direct contact, the opportunity for indirect transmission, and lack of toilet training among those factors that can increase the spread of infection in the child care setting. Transmission can also be affected by practices in the facility related to personal hygiene and sanitation. Hand washing and environmental sanitation are claimed to be of utmost importance in limiting the spread of micro-organisms.¹⁰
- The American Journal of Epidemiology reported on a study conducted in day care centres which demonstrated that hand washing will probably prevent diarrhea in day care centres. The incidence of diarrhea in two hand washing centres was half that of 2 control centres over the entire 35 week study period.¹¹

⁶ Queensland Health Population Health Quarterly, Vol. 2, No. 2, April 1997. *Communicable Diseases Report*.

⁷ Family Medicine (1997; 29(5); 336-339) *Hand Washing Rule Keeps Kids in School*.

⁸ NSW Health Department (1993) *Guidelines for the control of infectious diseases in child care*.

⁹ Paediatrics Supplement on Day Care Vol 94, No.6. *Hand Washing and Infection Control in Day-Care Centres*.

¹⁰ *Infectious Diseases in Children*, <http://www.slackinc.com/child/idc/199607/daycare.htm>

¹¹ American Journal of Epidemiology, 1981. 113:445-451.

3. The effectiveness of role model theory, parent involvement, and social learning theory in facilitating young children's learning

- A large body of learning research supports the importance of role modelling in young children's learning. More specific research shows that parents/carers make a vital contribution to their child's learning success. As at least 50% of human intelligence is developed before the age of 5 years, the learning which takes place for a young child when in the company of their parents/carers is important. A study on children learning found that young children learn a large amount through role modelling, - simply by spending time with their mothers.¹²
- *Germ Busters Early Childhood* recognises this, and aims to encourage the link between the child care setting and the home through parent/carer involvement and interest in the program. The program garners parent/carer support by giving them an active role in their child's hygiene behaviour development.¹³
- Child care staff are also made aware of the positive potential of parent/carer involvement in the program. *Germ Busters Early Childhood* provides a focus for opening the communication between child care staff and parents/carers and the wider community. Valuable links between child care staff, parents/carers, the Health Promotion Unit, Child Health Nurses, and Public Health Nurses will be established.
- From the child's perspective, parent/carer involvement in the program will reinforce the positive hygiene behaviours learnt within the child care setting, and convey to the child a greater sense of belonging as parent/carer and staff communication grows.
- Three basic assumptions underlie the 'Child-to-Child' program of health education as developed by University of London and used in over 50 countries around the world within national primary and community education systems. These basic assumptions are: (1) primary education becomes more effective if it is linked closely to things that matter both to children and their families and communities; (2) education in and out of school should be linked as closely as possible so that learning becomes a part of life; and (3) children have the will, the skill and the motivation to help educate each other and can be trusted to do so.¹⁴

4. Focus testing of local child care settings indicated expressed consumer need for hygiene behaviour knowledge and skilling

Germ Busters Early Childhood is an adaptation of the Primary School Germ Busters program. The original program was developed in response to a 1994 Needs Assessment showing that hygiene in schools was of widespread concern. This, local hepatitis A outbreaks in child care settings, and expressed need from child care centres prompted the adaptation of the program.

Child care centre focus test results indicated a need for increased knowledge of the correct and thorough hand washing procedure among group leaders, staff, parents/carers, and children within the child care setting. The children's understanding of the concept of germs and how they are spread was also found to be poor.

Child care staff cited that increased parent/carer responsibility for their child's hygiene behaviour development was required. Parents/carers indicated that they required

¹²Tizard, B. and Hughes, M., *Young Children Learning*, Harvard University Press, Cambridge, Massachusetts. 1984.

¹³ *What You Can Do in Child Care Settings*, <http://www.kidscampaigns.org/Start/101childcare26.html>

¹⁴ Child-to-Child: Another Path to Learning, UIE Monographs 13., Hawes, Hugh. <http://ericae2.edu/db/rc80/ed300345.htm>

education/information concerning hygiene.

1.4 Scope

Germ Busters Early Childhood is an intervention program for the child care setting. The program includes a comprehensive kit containing health-education resources for use by child care staff, children, and their parents/carers. Implemented by child care staff, the program is self-explanatory and contains a step-by-step program guide. The program requires no in-servicing to child care staff or parents/carers. The role of health professionals such as Health Promotion and Child Health, is one of support and assistance, rather than direction. The program is self-sustaining.

The *Germ Busters Early Childhood* program kit contains all of the components necessary to conduct the program. A variety of activities, resources, and information is provided to encourage a flexible and multi-disciplined approach to children's hygiene development.

The program is designed to increase knowledge of correct hygiene behaviours and skill staff, parents/carers and children in correct hygiene practice within child care settings. The use of resources and intervention strategies also aim to reinforce and maintain this in the home setting.

The program recognises the importance of role modelling, parent involvement, and social learning theories to harness young children's natural modes of learning. *Germ Busters Early Childhood* draws on these principles to resource and empower people involved in the child care setting to make positive and informed changes with regard to hygiene behaviour. The program does not directly aim to change child care policy with regard to hygiene, but to effect positive changes in hygiene behaviour - especially correct hand washing - which can be sustained and become habit in the longer term. *Germ Busters* supports the National Childcare Accreditation Council's principles of accreditation relating to hygiene and infection control. The *Germ Busters* Program also incorporates many of the updated infection prevention measures outlined by the NCAC in their most recent publication.¹⁵

This program is designed for use in the child care setting, but can be applied to other settings such as special education, early childhood education, and the home. It is designed to complement the *Germ Busters* Primary School Program.

1.5 Target Groups

The prime target groups for *Germ Busters Early Childhood* are child care directors/group leaders, staff, parents/carers, and children attending child care facilities.

1.6 Geographical Reach

This project is being trialed in the Gold Coast and West Moreton areas.

1.7 Related Activities

- *Germ Busters* Primary School program - compatible program. *Rebecca Cotton, Gold Coast Health Promotion Unit.*
- Oral Health Program - "Teeth Turning Two" - compatible program. Reinforcement of Oral health program themes and characters. *Helen Clifford, Oral Health Gold Coast.*

¹⁵ Accreditation Update No.12, June 1997. National Childcare Accreditation Council.

- Immunisation Project - the opportunistic nature of *Germ Busters Early Childhood* program, and the program's underlying premise of parent/carer involvement, presents a valuable opportunity to promote the link between infection control and immunisation. *Lynne Waters, Gold Coast Public Health Immunisation coordinator. Dr Brad McCall, Public Health Medical Officer.*
- Child Care Centre Principles of Accreditation and Standards - recent changes to the system of accreditation may impact on the program. *Department of Family, Youth, and Community Care, Meg Bevan.*
- Funding/rebate to parents/carers for child care. Changes in this policy may impact on the program. *Office of Family Services, Office of Family Services.*
- Communicable disease rates in Gold Coast Area. *Dr Brad McCall, Public Health Medical Officer. Russell Stafford, Epidemiologist, Brisbane South.*
- Results of a hygiene/infection control survey conducted in child care centres on the Gold Coast by Brisbane South Public Health will have significant bearing on the program. *Annette Neil, Brisbane South.*

2.0 PROJECT DETAILS

2.1 Goal

To increase knowledge, skill and practice of positive hygiene behaviours - particularly hand washing - by staff, parents/carers, and children in the child care setting. This positive hygiene behaviour change will contribute to the reduction in the spread of infectious diseases as proven in a wide body of research.

2.1.1 Project Performance Indicators

Program completion rates among those child care settings commencing the program.

Improved knowledge, skill, and practice of positive hygiene behaviours -specifically hand washing - among staff, parents/carers, and children in child care settings.

Reduced rates of transmission of infectious disease and illness preventable by correct hand washing behaviour, in child care settings.

Increased supply/use of liquid soap for hand washing in child care centres and in the homes of children who attend child care centres.

2.1.2 Project Targets

Completion of all 4 stages of the Germ Busters program by all child care settings commencing program.

Maximum and integrated use of program resources - such as education sessions, songs, etc - over duration of program implementation by staff in child care settings.

Awareness and knowledge of correct hygiene behaviour attained by statistically significant percentage of children, staff, and parents/carers in child care settings targeted by program.

Skill in correct hand washing technique attained by statistically significant percentage of child care staff, parents/carers, and children targeted by program.

Frequent scheduled practice of correct hand washing technique and behaviour conducted by statistically significant percentage of child care staff, parents/carers, and children in child care setting and home.

Increase in number of child care settings and homes of children targeted by program, which supply liquid soap for hand washing by conclusion of the program.

Rates of infectious disease/illness reported in child care settings reduced in comparison to pre-program incidence rates.

2.2 Objectives

To establish knowledge of infectious disease/illness, its transmission, and importance of correct hygiene practice among child care setting staff, parents/carers, and children.

To assure maximum efficacy of child care setting staff, parents/carers, and children in correct hygiene behaviours - especially correct hand washing behaviour.

To increase child care staff, parent/carer, and children's own involvement in hygiene development. Both within the child care setting and in the home.

To develop an infrastructure which supports and sustains the implementation of the program.

2.2.1 Impact Performance Indicators

Demonstrated knowledge of infectious disease/illness, its transmission, and importance of correct hygiene practice among child care setting staff, parents/carers, and children.

Maximum efficacy of child care setting staff, parents/carers, and children in correct hygiene behaviours - especially correct hand washing behaviour.

Increased involvement of child care staff, parent/carer, and children themselves in hygiene development. Both within the child care setting and in the home.

Infrastructure which supports and sustains the implementation of the program.

2.2.2 Impact Targets

Demonstrated knowledge of infectious disease/illness, its transmission, and importance of correct hygiene practice among statistically significant percentage of child care setting staff, parents/carers, and children conducting program, as measured by post testing.

Maximum efficacy of child care setting staff, parents/carers, and children in correct hygiene behaviours - especially correct hand washing behaviour, as measured by post testing.

Participation of statistically significant percentage of child care centre staff, parents, and children in children's hygiene development - particularly hand washing behaviour - as measured by post testing.

Established links between stakeholders and support organisations through service agreements (Colgate Palmolive; Child Health; HPU West Moreton; and HPU Gold Coast), and effective open communication channels (Office of Child Care; Office of Family, Youth and Community Care ; Communicable Diseases Unit; Child Care Settings).

2.3 Strategies

Develop service agreement between the South Coast Health Promotion Unit and West Moreton Health Promotion Unit regarding the system for introduction, implementation, and evaluation of the *Germ Busters* program into child care settings.

Develop service agreement between South Coast Health Promotion Unit and Child Health regarding the system for introduction and implementation of the *Germ Busters* program into child care settings.

Develop service agreement between South Coast Health Promotion Unit and Colgate Palmolive as sponsor of *Germ Busters* Program.

Establish collaborative links and communication channels between South Coast and West Moreton Health Promotion Units and other stakeholders and relevant bodies within Public Health and wider community.

Launch and distribute the *Germ Busters* Program to child care settings in the South Coast and West Moreton regions.

Develop mechanisms/incentives to help maximise participation of child care settings, their staff, parents/carers, and children in the *Germ Busters* Program.

Develop and implement a system of review and evaluation of the program throughout implementation stage, and upon completion of program.

Develop and implement a documented and expeditious system for participating child care settings to obtain assistance as well as extra resources and equipment as required for the implementation of the *Germ Busters* Program from Health personnel.

Develop and implement a system for Health Promotion Unit personnel to report bi-monthly to the South Coast Health Promotion Unit regarding the progress of the *Germ Busters* program in their area.

Compile and present bi-monthly progress report to sponsor.

Negotiate with sponsor to develop a system for providing participating child care settings with easy access to discounted or competitive product supply.

2.3.1 Process Performance Indicators

Service agreement between the South Coast Health Promotion Unit and West Moreton Health Promotion Unit developed.

Service agreement between South Coast Health Promotion and Child Health developed.

Service agreement between South Coast Health Promotion and Colgate Palmolive developed.

Collaborative links and communication channels between South Coast and West Moreton Health Promotion Units and other stakeholders and relevant bodies within Public Health and wider community developed.

Launch and distribution of the *Germ Busters* Program to child care settings in the South Coast and West Moreton regions conducted.

Mechanisms/incentives to help maximise participation of child care settings, their staff, parents/carers, and children in the *Germ Busters* Program developed.

System of review and evaluation of the program throughout implementation stage, and upon completion of program developed and implemented.

Documented and expeditious system for participating child care settings to obtain assistance as well as extra resources and equipment as required for the implementation of the *Germ Busters* Program from Health personnel developed and implemented.

System for Health Promotion Unit personnel to report bi-monthly to the South Coast Health Promotion Unit regarding the progress of the *Germ Busters* program in their area developed and implemented.

Bi-monthly progress reports to sponsor compiled and presented.

System for providing participating child care settings with easy access to discounted or competitive product supply in place.

2.3.2 Process Targets

Service agreement negotiated between the South Coast Health Promotion Unit and West Moreton Health Promotion Unit by October 1997.

Service agreement negotiated between the South Coast Health Promotion Unit and Child Health by October 1997.

Service agreement between the South Coast Health Promotion Unit and Colgate Palmolive negotiated by October 1997.

100% compliance with service agreement provisions.

Collaborative links and communication channels between South Coast and West Moreton Health Promotion Units and other stakeholders and relevant bodies within Public Health and wider community developed. These to include attendance and update briefings of *Germ Busters* program at: Working Group on Health Promoting Childcare Settings; Intersectoral Children's Issues Committee; Immunisation Steering Committee; Child care Centre Directors' meeting; etc. Measurable through attendance, agenda items, and action arising.

Launch and distribution of the *Germ Busters* Program to child care settings in the South Coast and West Moreton regions conducted by November 1997.

Mechanisms / incentives to help maximise participation of child care settings, and staff, parents/carers, and children in the *Germ Busters* Program developed and implemented into program by November 1997. (Competition, discounted product, activities, etc).

System of review and evaluation of the program throughout implementation stage, and upon completion of program developed and implemented by November 1997.

Documented and expeditious system for participating child care settings to obtain assistance as well as extra resources and equipment as required for the implementation of the *Germ Busters* Program from Health personnel developed and implemented by November 1997.

100% of child care settings participating in the *Germ Busters* Program to receive product lists and product order forms (product to include liquid hand wash, 'child-friendly' dispensers, paper towel, and towel dispensers) by November 1997.

System for Health Promotion Unit personnel to report bi-monthly to the South Coast Health Promotion Unit regarding the progress of the *Germ Busters* program in their area developed and implemented. First report to be submitted following launch, and then every 2 months after launch.

Progress report presented to program sponsor by South Coast Health Promotion Unit on time every two months.

System for providing participating child care settings with easy access to discounted or competitive product supply in place by December 1997.

3.0 DATA COLLECTION AND ANALYSIS REQUIREMENTS

3.1 Pre-Evaluation

- Generate concepts, issues, needs, and to gauge awareness related to hygiene in child care settings. Focus testing, questionnaires, and interviews conducted with stakeholders.
- Establish benchmarks against which to measure the effectiveness of the program objectives - current behaviours and hygiene practices. Environmental scan; questionnaires to staff and parents/carers; focus testing.
- Establish demographic information regarding child care centres in South Coast and West Moreton regions for use as independent variables during evaluation, and to be compiled as a reference source for others. Findings may also have relevance to other programs targeting same audiences.

3.2 Process Evaluation

- Document number and type of child care centres in South Coast and West Moreton regions.
- Document number of children in each centre.
- Listing of child care centre directors for invitation to launch. Department of Family, Youth, and Community Care. Invite directors and parent/carer representatives to launch.

APPENDIX 1 - GERM BUSTERS EARLY CHILDHOOD PROJECT PLAN

- Document child care centres attending launch.
- Document child care centres accessing *Germ Busters* through other means - Child Health, Department of Family, Youth, and Community Care, Health Promotion Unit, etc.
- Satisfaction of introduction of *Germ Busters* program to child care centres.
- Child care centre staff satisfaction with *Germ Busters* kit components, and the implementation process. Frequency of use of each resource and activity.
- Child care centre staff satisfaction with co-ordination of program and role of Health Promotion Unit, Child Health.
- Child care centre staff satisfaction with access to assistance and UV Lightbox, additional resources, etc.
- Parent/carer satisfaction with program resources and their role in program.
- Parent/carer response to program.
- Children's response to program resources and activities.
- Staff intentions with regard to program implementation. Eg: parent-centre communication channels, parent involvement, etc.
- Perceived barriers / limitations to effective implementation of program.
- Number of resources distributed to children and parents/carers. Number of children and parents/carers attending education session, participating in grid activity, washing hands on arrival and departure.

3.3 Impact Evaluation

- ongoing activities within child care centre and in the home.
- changes to child care centre environment.
- environmental audit of centre toilets.
- commitment of administrators to continuing program and supply of liquid hand wash and paper towels;
- staff, parent/carer, and children's degree of knowledge of hygiene and related behaviours determined by survey at conclusion of program.
- staff, parent/carer, and children's attitudes towards, and practice of correct hand washing and hygiene behaviours as determined by survey at conclusion of program.
- requests from centres and parents/carers for additional resources such as liquid soap, kit resources, etc.

3.4 Contextual Analysis - changes, initiatives and developments beyond boundaries of program itself.

- community links or initiatives which have occurred, and relate to program.
- policy changes or initiatives which have occurred, and relate to *Germ Busters* program. Eg accreditation, standards, training, education, role of Child Health Nurses, etc.
- changes in parent/carer and child care setting communication - attitudes, behaviours, activities & events at centre, parent-staff contact time and opportunity.

3.5 Outcomes

- maintenance, extension, and continuation of program in full or part after completion of all stages.
- changes and improvements in health status indicators - reports of illness, absenteeism, staff illness, etc.
- reductions in rates of communicable diseases
- policy or accreditation changes.

4.0 BUDGET

4.1 Budget

Labour-related Costs

- staff base salaries
- on-costs

LABOUR-RELATED SUB-TOTAL

Specific Project Costs

- project activities
- training - in-servicing of HPU, Child Health, and Centre Staff & parent representatives
- catering
- graphic design
- printing
- photocopying
- data collection and analysis
- travel
- travel allowance
- accommodation
- stationery and office requisites
- postage - reply paid for evaluation
- telephone
- fax
- accommodation rent/lease
- electricity
- equipment purchase rent/lease - more UV Lightboxes
- freight/couriers

NON-LABOUR SUB-TOTAL

TOTAL

4.2 Budget Justification

Germ Busters Early Childhood is a resource-heavy program in which child care setting staff and parents/carers are among the main players. In-servicing and distribution of the kits and resources would therefore be most efficiently achieved through a workshop in each region rather than a launch. The workshop would include HPU, Child Health, and Child care setting staff and parent representatives, as well as other stakeholder representatives such as Office of Family, Youth, and Community Care, etc. Therefore travel allowance and training are factored into the project costs.

5.0 POTENTIAL RISKS AND BARRIERS

5.1 Potential Risks/Barriers

Accurately determining total number of children, and number of children per family, in each child care setting for the efficient distribution of resources.

Health and Child care staff may use components of Kit inappropriately (non cost efficient). Unnecessary re-printing of certain resource components of the kit is not economically viable.

Compliance with Service Agreements: Evaluation and feedback/assistance channels may be at risk of becoming confused between role of HPU and Child Health. This may be in regard to borrowing of UV Lights, return of evaluation to HPU, etc.

Additional resources costs cannot to be borne by HPU as not factored into budget.

Non-compliance with sponsorship agreement: Competing needs could contaminate implementation process.

Parent/carer participation may not be forthcoming, undermining the successful reinforcement of behaviours in the home setting, and hand washing on arrival and departure from centre.

Cost to centres for provision of liquid soap and paper towels, etc may be prohibitive.

5.2 Management Strategies

Accurate measurement of number of resources needed per child, per centre, and per home to be finalised in advance of launch/workshops. Developing an efficient distribution mechanism and high attendance at initial regional workshops is also vital to this process.

During in-servicing, demonstrate the 'low key' nature of the program for Health personnel. Also emphasise that the role for health staff is in introduction and assistance only - health staff have no active implementation role in individual centres. Definition of roles, responsibilities, and communication channels to be emphasised during in-service.

A full understanding of the agreement and the process of reporting etc, to be complied with by sponsor, and participating HPU's. This process needs to be made as simple and straight forward as possible for all parties concerned.

During in-servicing, explain provisions in sponsorship agreement and conditions which must be complied with. Conditions to be reflected in service agreements: standard media releases to be provided to participating Health Promotion Units; any changes to standard media release must be approved by South Coast Health Promotion Unit and sponsor through South Coast Health Promotion; sponsor requires one month's notice of all intended public relations activities regarding the *Germ Busters* Program.

APPENDIX 1 - GERM BUSTERS EARLY CHILDHOOD PROJECT PLAN

Provision in service agreements: any workshops or local launches must be held at times and venues most appropriate for child care setting staff and parent/carer attendance; Program Kits must be introduced to centres via the centre staff and parent/carer representatives; all correspondence to centres post introduction to be via co-ordinator.

Provisions in service agreement regarding the use of program components and resources.

Requests for additional "Glitter Bug" glow gel potion to be directly addressed to Arrow Scientific. Advise of additional sorbolene cream and Discloplaque to be purchased by centre from supermarket/chemist.

Incentives, motivations, and support for parents/carers needed.

Prohibitive cost to centre's for supply of soap and towels etc could possibly be addressed within the sponsorship agreement in lieu of competition prizes, etc.

6.0 PROJECT MANAGEMENT

6.1 Management Structure and Accountabilities

Sponsorship Agreement

A sponsorship agreement governing the macro-process of the *Germ Busters Early Childhood Program* to be established between the Office of the Director-General of Health Services and Colgate-Palmolive Pty Ltd. The Queensland Health signatories to this sponsorship agreement to be specified.

The sponsorship agreement documents the obligations of both the sponsor and the State of Queensland through QLD Health regarding the *Germ Busters Early Childhood Program*. This agreement has a significant impact upon the processes developed and utilised at the local level. It is vital that all staff involved in the co-ordination of the *Germ Busters Early Childhood Program* familiarise themselves with this sponsorship agreement.

Project Team

Ms Shanon Quinn, South Coast Health Promotion Unit, Southern Public Health Network
- accountable for relations/communications with sponsor
- accountable for the co-ordination of program introduction in the South Coast area

Health Promotion Officer, West Moreton Health Promotion Unit, Southern Public Health Network
- accountable for the co-ordination of program introduction in the West Moreton area
- accountable for initial launch/workshop organisation, bi-monthly progress reports to South Coast Health Promotion Unit, and submission of any related public relations materials to South Coast Health Promotion Unit for referral to sponsor, as per service agreement.

Child Health representative from each region - South Coast and West Moreton
- accountable for co-ordination of program as per service agreement.

6.2 Key Stakeholders/Partners

Palmolive Softwash Antibacterial Liquid Hand Wash - program sponsor.

District Health Services in the South Coast and West Moreton regions.

Arrow Scientific - suppliers of 'Glitterbug Potion'.

Child Health

Communicable Diseases Unit

Office of Youth, Family, and Community Services

Office of Child Care

Child Care settings

APPENDIX 1 - GERM BUSTERS EARLY CHILDHOOD PROJECT PLAN

7.0 TIMELINE

	Activities Objective/Strategy No.	Person Responsible	Weeks	1 st Quarter			2 nd Quarter			Comments
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										



Germ Busters

EARLY CHILDHOOD EVALUATION

Group Leader Questionnaire

- Q1. In the child care setting list the factors that make children prone to infections:**
- 1
 - 2
 - 3
 - 4
 - 5
- Q2. What do you see as problems in maintaining correct hygiene and hand washing behaviour (answer in point form)**
- 1
 - 2
 - 3
 - 4
- Q3. On a scale from 1 to 10 (1 represents the group leaders responsibility and 10 the parents responsibility), who do you feel is responsible for the teaching of hygiene practice? (Circle)**
- GROUP LEADER RESPONSIBILITY 1 2 3 4 5 6 7 8 9 10 PARENTS RESPONSIBILITY
- Q4. Do you liaise with parents/carers in regard to how and when hand washing should take place?**
- Never
 - Sometimes
 - Often
 - Always
- Q5. How often are children supervised when hand washing?**
- Never
 - Sometimes
 - Often
 - Always

Q6. When should the children be required to wash their hands? List 6 occasions

- 1
- 2
- 3
- 4
- 5

Q7. When should you wash your hands? List 8 occasions

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8

EARLY CHILDHOOD 2-3 YEARS

Q1. When do you wash your hands?

- A1.
- When you come to the centre in the morning
 - After nappy changing
 - After going to the toilet
 - After playing outside
 - After blowing your nose
 - Before going home

Q2 Why do you wash your hands?

A2 Because they're dirty

Q3 How do you wash your hands?

- A3
- With soap and running water
 - Rub hands together
 - Wash - back, wrist, between fingers, under fingers
 - Dry Hands

Q4. Show me how to wash your hands.

EARLY CHILDHOOD 3-5 YEARS

Q1. When do you wash your hands?

- A1.
- When you come to the centre
 - After nappy changing
 - After going to the toilet
 - After playing outside
 - After blowing your nose
 - Before going home

Q2 When do you wash your hands at home?

Q3 Why do you wash your hands?

A3 Because they're dirty and to kill germs

Q4 How do you wash your hands?

- A4
- With soap and running water
 - Rub hands together
 - Wash - back, wrists, between fingers, under fingernails
 - Dry Hands

Q5 Show me how to wash your hands?

Q6 What happens if you don't wash your hands?

A6 You get sick



Germ Busters

EARLY CHILDHOOD EVALUATION

Parent/Guardian Questionnaire

Name of the Child Care Centre your child attends:

Age and sex of your child/children attending the Child Care Centre
(please include only those children attending the Centre)

____ Years	____ Months	____ Female	____ Male
____ Years	____ Months	____ Female	____ Male
____ Years	____ Months	____ Female	____ Male

Q1. How important is it that your child wash his/her hands.....

Before eating	1	___Very important
(please tick one only)	2	___Somewhat important
	3	___Unimportant
After Eating	1	___Very important
(please tick one only)	2	___Somewhat important
	3	___Unimportant
After using the toilet	1	___Very important
(please tick only one)	2	___Somewhat important
	3	___Unimportant
After being outside	1	___Very important
(please tick only one)	2	___Somewhat important
	3	___Unimportant

Q2 How often does your child express the need to wash his/her hands without being prompted by you or others? (please tick one only)

1	___Most of the time
2	___Some of the time
3	___Rarely or never

Q3 How often do you wash your child's hands when entering or leaving the child care centre?

1	___Most of the time
2	___Some of the time
3	___Rarely or never

Q4 How often does your child wash his/her hands without supervision at home?
(please tick only)

1	___Most of the time
2	___Some of the time
3	___Rarely or never

APPENDIX 3 – PRE-PROGRAM QUESTIONNAIRE B (PARENTS/CARERS)

Q5 My child is immunised against the following:(please tick all appropriate boxes)

Whooping Cough Diphtheria/Tetanus				Not applicable		
Polio				Not applicable	Not applicable	
HI B				Not applicable		Not applicable
Measles/Mumps Rubella	Not applicable	Not applicable	Not applicable		Not applicable	
Hepatitis B	1 st	2 nd	3rd	Not applicable	Not applicable	Not applicable

Q6 The information supplied for the previous question Q5 came from: (please tick one only)

- 1 Your child's personal health record book
- 2 The family doctor
- 3 Personal recall
- 4 Other - please specify

Q7 If a free immunisation clinic was available at your child care centre would you make use of it?

- 1. Yes
- 2. No

Q8 Please indicate if you would like any more information on any of the following diseases. (please tick where appropriate)

- Whooping Cough
- Chickenpox
- Measles
- Meningococcal Disease
- Hepatitis A
- Hepatitis B
- Other - please specify

Q9 Do you feel that a greater degree of parent/guardian involvement at the centre would be...

- 1. Beneficial
- 2. Unnecessary
- 3. Great idea but hard to achieve

Q10 If available, which of the following parent/guardian participation activities would you like to be involved in at the centre? (please tick at least one or more of the following where relevant)

- Volunteering to help out with centre play and activities
- Visiting your child during the day or at lunchtime
- Time to play with child at the centre, when you drop them off and collect them
- Specialising/networking with other parents/guardians while at the centre
- Attend educational sessions on topics relevant to children's development and parenting
- I do not wish to have anymore involvement
- Other - please specify

Q11 Do you have any ideas that we could share/initiate to get parents directly involved with the Germ Busters Early Childhood Program? (please write in point form)

APPENDIX 4: POST-PROGRAM QUESTIONNAIRE C (DIRECTOR / STAFF)

**Germ Busters: Childcare Centres
Evaluation of program**

1. Name of Centre
2. Name of Co-ordinator
Position
3. Pre-evaluation questionnaires
PARENTS: Number sent Number returned
STAFF: Number sent Number returned
4. Did you use the handwashing grid? Y/N
5. Did you run an information program..... for staff Y/N
for children Y/N
for parents Y/N
6. Did you use the UV Lightbox activity? Y/N
7. Did you use the 'Crown Colouring In' activity? Y/N
8. Were the grid certificates used? Y/Nas rewards Y/N
9. Are you continuing to prompt/teach the children about handwashing Y/N
10. What do you consider was the most effective activity?
Why?
11. What was the least effective part of the program?
Why?
12. Staff support: Did most/some/a few staff support the program?
13. Would you describe Management support as; good/moderate/minimal?
14. Parent support: Was there support from most/some/a few ?
15. Were the take home resources attractive to children? Y/N
Which of them was of most interest to the children?
16. Has the Germbusters program changed your practice or emphasis re.
children's
handwashing? Y/N
17. Any other comments?

APPENDIX 5: STANDARDISED OBSERVATION CHECKLIST

Name of Centre: _____

Time: _____

Date: _____

Number of Children in centre: _____

Number of children under observation: _____

Age Range: _____

No of access doorways, to toilets: _____

No of toilets: _____

No of handbasins: _____

OBSERVATION PERIOD: 1st Post ob

1. Entering Centre

2. After Toilet

3. Before Meal

4. After Play

5. Leaving Centre

STRUCTURAL – Soap

	Y	N
Soap provided	<input type="checkbox"/>	<input type="checkbox"/>
Soap type:		
bar	<input type="checkbox"/>	<input type="checkbox"/>
soap dispenser	<input type="checkbox"/>	<input type="checkbox"/>
accessible	<input type="checkbox"/>	<input type="checkbox"/>

Comments:

STRUCTURAL – Towels

	Y	N
Paper Dispenser – paper only	<input type="checkbox"/>	<input type="checkbox"/>
Cloth	<input type="checkbox"/>	<input type="checkbox"/>
Towels	<input type="checkbox"/>	<input type="checkbox"/>
Hand Drying Machine	<input type="checkbox"/>	<input type="checkbox"/>
None	<input type="checkbox"/>	<input type="checkbox"/>
Cloth – individual	<input type="checkbox"/>	<input type="checkbox"/>
Cloth - shared	<input type="checkbox"/>	<input type="checkbox"/>

Comments:

Germ Busters

Germ Busters Early Childhood Observation Checklist												
Observation Number =						Centre Name =						
Child No.	Obs period	Age	Washing							Soap	Dry	
			Y/N	Palm	Back	Fingers	Nails	<10sec	10-20 sec			>20 sec
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												

Germ Busters

What happens, and when?

Pre-program

Centre agrees to participate
Observation 1 (Diane from South Coast, Public Health Unit)

Program begins:

Week 1

- ◆ Appoint a coordinator for the centre
- ◆ Distribute Evaluation Questionnaire to parents/guardians
- ◆ Distribute Evaluation Questionnaire to staff
- ◆ Get ready to start program next week

Week 2

- ◆ Introduce *Germ Busters* to staff, and parents/guardians
- ◆ Plan education sessions with staff and practice handwashing techniques with staff first

Week 3

- ◆ Education sessions.....staff, children and parents/guardians
- ◆ Start Handwashing Grid

Week 4

- ◆ UV Lightbox activity
- ◆ *Germ Busters* Crown Colouring Competition

Week 5

- ◆ Grid results and certificates
- ◆ Continue with *Germ Busters*
- ◆ Observation 2 (Diane from South Coast, Public Health Unit)

Week 10

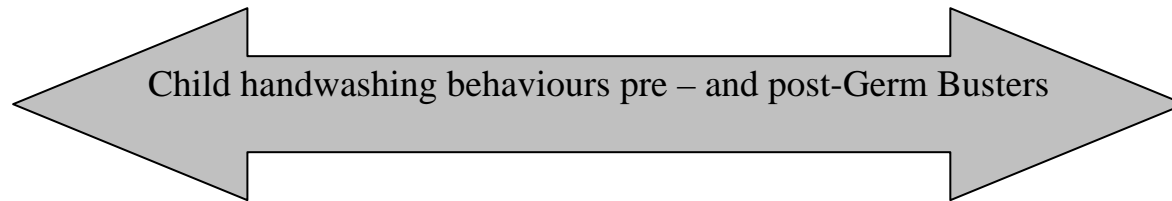
- ◆ Observation 3 (Diane from South Coast, Public Health Unit)

End of program

(See page 13 of *Germ Busters* folder for detail on the program)

Germ Busters

Project Logic Model



Program launch and Recruitment Process

Pre-Intervention Data Collection

- Questionnaire A (to staff)
- Questionnaire B (to parents/ carers)
- Observation 1 (child handwashing)



Immediately Post – Intervention Data Collection

- Observation 2 (child handwashing)

5 week Post-Intervention Data Collection

- Observation 3 (child handwashing)
- Questionnaire C (resource kit usage & acceptability)

APPENDIX 9: PROGRAM COMMENTS

Examples of the range of comments:

<ul style="list-style-type: none">• “Staff personal hand washing practices were perceived to change the most due to the program.”
<ul style="list-style-type: none">• “Would like to see it as a normal part of the program. Program was a good stimulus. Autumn is more aware of and conscious of when to get children to wash their hands. Children were heard to tell other children that they did not wash their hands correctly.”
<ul style="list-style-type: none">• “Washed hands after nose wiping. Good resources. Good to have reminders. Yearly seminars would be good.”
<ul style="list-style-type: none">• “Worthwhile program.”
<ul style="list-style-type: none">• “More aware of handwashing, felt program was successful.”
<ul style="list-style-type: none">• “Staff more conscious of need. Use wet wipes on babies’ hands. Nail brushes have been bought for staff.”
<ul style="list-style-type: none">• “More age specific activities, eg separate for dinky and preschool. Good program. Use baby wipes outside because don’t have taps. Pump action soap now provided for carers and older children. Clean toys in Milton more often than previously, especially in younger children room.”
<ul style="list-style-type: none">• “Practice changed especially coming from outside to inside. Can only educate some parents. Program has to fit in around daily routines – teachers and parents. Good to use all year.”
<ul style="list-style-type: none">• “Use more soap and toilet paper. Staff changes & accreditation a problem, felt program was too long, especially to keep enthusiasm high. More diligent about bathroom cleanliness, eg wiped sinks down during day, used air freshener.”
<ul style="list-style-type: none">• “A great program! It was well organised & as a result of this easy to implement. Children’s behaviours & knowledge of handwashing improved.”
<ul style="list-style-type: none">• “Made staff aware, folder could be simplified.”
<ul style="list-style-type: none">• “More soap is used for handwashing in bathroom.”
<ul style="list-style-type: none">• “A lot of time spent reading and photocopying, could be more simple.”
<ul style="list-style-type: none">• “UV light expensive to set up (\$70). Discolpaque had to be specially ordered. Three doctors commented that it was necessary to expose children to germs to build immunity, Parents too busy and waste of time.”
<ul style="list-style-type: none">• “Needs to be simplified and less emphasis on all of the activities. If you give people guidelines, they can be more creative within these guidelines.”
<ul style="list-style-type: none">• “Parents in a hurry and only a few washed on entry and exit.”
<ul style="list-style-type: none">• “Children had trouble differentiating between ‘good’ and ‘bad’ guys. Letters home to parents should be simpler and more concise.”
<ul style="list-style-type: none">• “Make it simple, return visit sooner. There was along gap between delivery of resources commencing program and borrowing UV box.”
<ul style="list-style-type: none">• “Needs to be refined and made more user friendly.”

QUALITATIVE SECTION APPENDICES

APPENDIX A: TELEPHONE INTERVIEWS / FACE TO FACE INTERVIEWS

**Germ Busters Evaluation and Communication Review
Questionnaire Pilot to Directors**

Introduction

Firstly, I'd like to find out your opinions of the Germ Busters program overall. I will ask you a few questions relating to the various components included in the program kit. If you would like me to describe any part of the kit more fully, - so we're both discussing the same thing, - please just ask. That's no problem at all.

Name of Centre _____

Name of Co-ordinator _____

Position _____

Number of Children in the Centre _____

1. Are you or your staff currently using any part of the *Germ Busters* program in your centre?

Y/N

—————▶ If yes, what are you still using (please list)

2. What do you think of the ring binder manual?

2a Was it user friendly to staff?

Y/N

—————▶ If no, why not.

2b Was the content of the manual detailed and comprehensive enough to enable you / your staff to carry out the *Germ Busters* program?

Y/N

—————▶ If no, what was the manual lacking?

2c With regard to presentation, was the ring-binder format / layout itself, easy to navigate through / make sense of?

Y/N

—————▶ If no, why not? Did you find it contained too much detail, or was it difficult to find resources? What format / layout do you think would have been better?

APPENDIX A – TELEPHONE INTERVIEWS / FACE TO FACE INTERVIEWS

3. With regard to the master copy resources in the manual, was access to a photocopier, or the cost of photocopying resources a problem for centre? **Y/N**

4. Do you feel that the information and training you were given at the launch, and as part of the kit, was enough to carry out the program? **Y/N**

—————> If no, should more specific training and/or information be given At the launch when you collect the kits?

_____ and if so,

what type of training and/or information would you like?

5. What did you think of the suggested taskline in the manual? (Was it reasonable? Was it flexible enough?)

6. You were encouraged to choose from a number of program resources and Activities? Which did you choose to use, and why?

7. Were there any resources or activities that you deliberately chose not to use, for any reason other than time constraints? If so, what were the resources/activities, and why did you deliberately make the choice not to use them?

8. Were there any particular barriers that prevented you from carrying on with the program after the evaluation finished?

9. Can you think of ways which it could be made easier for you to carry on with the program?

10. Did staff actively involve themselves in carrying out the program? **Y/N**

—————> If no, why do you think this was?

11. Was an information session for staff held before the program was started? **Y/N**

—————> If yes, how did you do this?

APPENDIX A – TELEPHONE INTERVIEWS / FACE TO FACE INTERVIEWS

12. Did you hold an information session for parents? **Y/N**
—————▶ If yes, how did you do this?

13. Did you use the letter to parents that was included in the kit? **Y/N**
11. How else did you encourage parent involvement during the program?

12. What do you think could be done to improve the amount of parent involvement in the program?

13. With regard to the hand washing grid activity, did you prepare the hand washing grid resource? **Y/N**
—————▶ If no, why not?

14. Do you think this grid could be improved or made more user-friendly?

15. Now some questions about the poster education sessions for the children. Did you conduct these sessions with the children? **Y/N**
—————▶ If yes, approximately how often did you conduct these sessions with each group? _____
Did you have the posters laminated? **Y/N**
16. With the kit each centre and each child were given a hand washing sequence poster. Did you display this poster in the centre? **Y/N**
17. Was it used by staff to prompt children during handwashing? **Y/N**
21. Do you think it was an effective resource? **Y/N**
22. Now some questions about the UV lightbox. Did you use the UV lightbox? **Y/N**
—————▶ If yes, did you make your own or borrow one from the Health Promotion unit? _____
—————▶ If no, why did you choose not to use this?

APPENDIX A – TELEPHONE INTERVIEWS / FACE TO FACE INTERVIEWS

23. With regard to the children's interest in the program, do you think that improvements could be made to increase/maintain their interest? If so, what do you suggest? And how would this help?

24. Do you think that ongoing information about the program during the year would help your centre to carry on with *Germ Busters* in the longer term? Y/N

—————> If so, what type of information do you suggest?
(Information directed to children, staff, or parents?)

25. Which local childcare/early childhood magazines, newsletters and publications does your centre receive?

26. Are these available to staff? _____ To parents? _____

The *Germ Busters* program this year is expanding to look more broadly at some other issues which impact on disease transmission in childcare and early childhood settings. We would like to finish up by asking you about your possible involvement in these other aspects.

Vaccination:

Ensuring staff and children are vaccinated against all infectious diseases that we can protect against helps to reduce outbreaks. This includes some vaccines like the new chicken pox vaccine which are not on the national schedule.

Would you be interested in participating in;

- a. An audit of staff and child care attendees to identify unvaccinated persons. Y/N
- b. Distribution of information pamphlets about vaccines to parents and staff. Y/N
- c. Education sessions about vaccines. Y/N

Food Hygiene:

Do you prepare any meals at your childcare centre? Y/N
If yes, would you be happy to answer a questionnaire about food safety? Y/N

APPENDIX B: MAIL-OUT INTERVIEWS

Germ Busters Early Childhood Hygiene Program
Questionnaire to Directors

The *Germ Busters* program was implemented in centres on the Gold Coast 12 months ago. You, your centre, or some of your staff may have been involved in carrying out the program then, or may still be implementing it in part now. We would greatly appreciate your feedback on the program.

Germ Busters is now being evaluated and enhanced for a new release in January 2001. It's a free resource for your centre, and we value your input into how to improve it. Let us know your thoughts (or those of your staff which may have been involved) by filling out the brief questionnaire below. Your assistance is greatly appreciated. Thank you, we'll be in contact again before January!

Should you require any help at all with the following questions please do not hesitate to contact the Health Promotion Unit on 5509 7222.

It may be necessary to share the questionnaire with other staff in order to complete it. For example in some child care centres the director attended the launch but was not involved in the implementation of the program.

Centre Information:

Centre Name: _____

Centre Address: _____

Contact Name: _____

Please return the completed questionnaire in the reply paid envelope to:

**Dr Paul Van Buynder
Public Health Physician
Reply Paid 267
SOUTHPORT BC QLD 4215**

Gerbusters Review

1. Are you or your staff currently using any part of the *Germ Busters* program in your centre?
(For example this could be the use of the handwashing technique poster; story script posters; stickers; arrival and departure handwashing practice; or teaching the handwashing technique as described in *Germ Busters*.) Y/N

If yes, what are you still using? (Please list)

2. What do you think of the ring binder manual?

Did staff find it user friendly? Y/N

If no, why not?

3. Was the content of the manual detailed and comprehensive enough to enable you/your staff to carry out the *Germ Busters* program? Y/N

If no, what was the manual lacking?

4. With regard to presentation, was the ring-binder format/layout itself, easy to navigate through/make sense of? Y/N

If no, was this because there was too much detail, or was it difficult to locate the resources? What format/layout do you think would have been better?

5. With regard to the master copy resources in the manual, was access to a photocopier, or the cost of photocopying resources a problem for your centre? (Please tick)

Yes, access to a photocopier was a problem _____

Yes, cost of photocopying was a problem _____

No, photocopying resources was not a problem _____

APPENDIX B – MAIL-OUT INTERVIEWS

6. Do you feel that the information and training you were given at the launch, and/or as part of the kit, was sufficient? **Y/N**

If no, should more specific training and/or information be given at the launch when you collect the Kits? **Y/N**

If yes, what type of training and/or information would you like?

7. What did you think of the suggested taskline/timeline in the manual? (Was it reasonable? Was it flexible enough?)

8. You were encouraged to choose from a number of program resources and activities. Which did you choose to use, and why?

9. Were there any resources or activities that you deliberately chose not to use for any reason other than time constraints? **Y/N**

If yes, what were the resources/activities, and why did you deliberately make the choice not to use them?

10. Were there any particular barriers that prevented you from continuing with the program throughout the year?

No, there were no barriers. We continued with the program (either in its entirety or in part) _____

Yes, there were barriers _____

If yes, what were the barriers?

How could continuing with the program be made easier for you?

APPENDIX B – MAIL-OUT INTERVIEWS

11. Did staff actively involve themselves in carrying out the program? **Y/N**
If no, why do you think this was?

12. Was some type of an information session for staff held before the program was started? **Y/N**
If yes, how did you do this?

13. Did you hold some type of an information session for parents? **Y/N**
If yes, how did you do this?

14. Did you use the letter to parents that was included in the kit? **Y/N**
If no, why not?

15. How else did you encourage parent involvement during the program?

16. What do you think could be done to improve the amount of parent involvement in the program?

17. With regard to the hand washing grid activity to track children's handwashing on arrival and departure, did you prepare a handwashing grid resource? **Y/N**
18. Do you think the hand washing grid activity could be improved or made more user friendly? **Y/N**
If yes, how? _____

19. Now some questions about the poster education sessions for the children. (These were the set of posters with story script on back). Did you conduct these sessions with the children? **Y/N**
If yes, approximately how often did you conduct these sessions with each Group? _____
Did you have the posters laminated? **Y/N**

APPENDIX B – MAIL-OUT INTERVIEWS

20. With the kit each centre and each child were given a hand washing sequence poster. (“This is the way we wash our hands.....”) Did you display this poster in the centre? **Y/N**

21. Was it used by staff to prompt children during handwashing? **Y/N**

22. Do you think it was an effective resource? **Y/N**

If no, why not?

23. Now some questions about the UV lightbox and Glo Gel activity. Did you use the UV lightbox? **Y/N**

If yes, did you make your own or borrow one from the Health Promotion Unit or Community Child Health?

If you didn't do the UV lightbox activity, why not?

24. With regard to the children's interest in the program, do you think that improvements could be made to increase/maintain their interest? If so, what do you suggest?

25. Do you think that ongoing information about the program during the year would help your centre to carry on with *Germ Busters* in the longer term? **Y/N**

If yes, what type of information do you suggest and when?

26. Which local child care/early childhood magazines, newslettter and publications does your centre receive? Eg. *Gold Coast Kids, Coastal Child*

Which of these publications – if any are available to staff?

Which of these publications – if any are available to parents?

APPENDIX B – MAIL-OUT INTERVIEWS

The Germ Busters program this year is expanding to look more broadly at some other issues which impact on disease transmission in childcare and early childhood settings.

We would like to finish up by asking you about some of these other aspects.

Vaccination:

Ensuring staff and children are vaccinated against infection helps to reduce outbreaks in childcare centres. This includes the use of some vaccines which are not on the national schedule like Hepatitis A vaccine or the new chickenpox vaccine.

29. Do you keep a record of the immunisation status of:

- | | | |
|----|-----------------------|-----|
| a. | Child care attendees. | Y/N |
| b. | Staff. | Y/N |

30. Are staff **required** to be vaccinated against:

- | | | |
|----|---------------------------------|-----|
| a. | Chicken pox (varicella) vaccine | Y/N |
| b. | Hepatitis B vaccine | Y/N |
| c. | Hepatitis A vaccine | Y/N |
| d. | Measles vaccine | Y/N |
| e. | Any other vaccine | Y/N |

If yes, please list _____

31. Are staff **offered** vaccination by your centre against:

- | | | |
|----|---------------------------------|-----|
| a. | Chicken pox (varicella) vaccine | Y/N |
| b. | Hepatitis B vaccine | Y/N |
| c. | Hepatitis A vaccine | Y/N |
| d. | Measles vaccine | Y/N |
| e. | Any other vaccine | Y/N |

If yes, please list _____

APPENDIX B – MAIL-OUT INTERVIEWS

Information about vaccination in child care settings is available from the Public Health Unit and from vaccine manufacturers.

32. Do you currently conduct education sessions about vaccination for
- a. staff Y/N
 - b. children / parents Y/N
33. Would you be interested in receiving information about vaccination for distribution to parents and centre staff.
- Y/N

Food Hygiene:

34. Does your centre prepare any meals at the centre? Y/N
35. If yes, have your staff had training in food safety and hygiene? Y/N
36. Would you be happy to answer a questionnaire about food safety? Y/N

Thank you very much for your time and expertise in completing this questionnaire. We look forward to providing you with a new and improved Germ Busters Program in 2001!

Please return this to the Health Promotion Unit in the reply paid envelope provided.

APPENDIX C: COLLATED QUANTITATIVE DATA

**COLLATED QUANTITATIVE RESPONSES TO QUESTIONNAIRE
N=15**

QUESTIONS	YES	NO	UNSURE	DIDN'T ATTEND	TOTAL
1. Still using the program	14	1	0	0	15
2a. User Friendly (manual)	11	3	1		15
2b. Comprehensive Enough	13	1	1		15
2c. Format/Layout (easy to use)	15	0	0		15
3. Problems accessing photocopier	0	15	0		15
4. Information/Training (enough)	11	0	0	4	15
10. Did staff involve themselves	15	0	0		15
11. Info session for Staff	11	4	0		15
12. Info session for Parents	1	14	0		15
13. Was letter to parents used	10	5	0		15
16. Hand Washing Grid	13	2	0		15
18a Poster education sessions	14	1	0		15
18b. Were the posters laminated	7	7	1		15
19. Hand washing sequence poster	14	0	1		15
20. Used by staff to Prompt children	13	1	1		15
21. Was it an Effective Resource	14	0	1		15
22. UV lightbox	6	9	0		15
24. On going Information	13	1	1		15
VACCINATION				Already Have	
A. Audit of unvaccinated person	6	1	6	2	15
B. Info pamphlets to parents & staff	14	1	0		15
C. Education sessions about vaccines	13	0	2		15
FOOD HYGIENE					
Meals Prepared at Centre	5	10	0		15
Questionnaire on food safety	5	0	0		5

APPENDIX D: COLLATED QUALITATIVE DATA

Collated Qualitative Responses to Questionnaire

Ring Binder Manual (Questions: 2, 3, 4, 5)

2. What do you think of the **ring binder manual**?

- Fine. Good x 4
- Daunting at first looked
- Too much information x 3
- Not enough time
- Could be off putting.
- Very time consuming x 3
- (Time consuming to wash their hands anyway before morning tea at 9.am)
- Quite good
- Make easier
- Useful, photocopied the mobiles didn't use Hand washing grid.
- Using manual now
- Don't know about it
- Difficult to get through
- Great detailed
- Easy to use
- Self explanatory
- You can add to it (I.e. handwashing game, with GB characters.)
- Reinforce with Pre-school room (dot to dots)
- Over kill, waste of paper
- Excellent

2a. Was it user friendly to staff?

- I think so
- Could be off putting
- All used it, got to simplify it x 2
- Pre-school teachers
- Probably for staff, or for older children
- Can't remember – unsure
- Same problem (too time consuming and info, difficult to get through)
- Time consuming

2b. Was the content of the manual detailed and comprehensive enough to enable you/your staff to carry out the *Germ Busters* program?

- Too much x 3
 - Fine
 - Unsure
 - Too detailed
 - Hard to navigate through
 - Blue folder the pictures are too big to look through
 - Difficult to find space to spread them out
 - Easy to read
- > If no, what was the manual lacking?
- More resources

APPENDIX D: COLLATED QUALITATIVE DATA

2c. With regard to presentation, was the ring binder **format/layout** itself, easy to navigate through/make sense of?

- Once got into it. Size to start with, bit daunting
- Grid easy to photocopy
- Fine x 3
- Very
- Excellent

—————> If no, why not? Did you find it contained too much detail, or was it difficult to find resources? What format/layout do you think would have been better?

- Folder = good concept or booklet – simple format of area to cover. Didn't use resources (e.g. hats etc.) songs were good. Adlibbed rather than resources.
- No
- Too much detail
- Too big

3. With regard to the **master copy resources in the manual**, was access to a photocopier, or the cost of photocopying resources a problem for your centre?

- No cost problems
- Have access to photocopier x 2
- Fine x 2
- Not at all

4. Do you feel that the information and training you were given at the launch, and as part of the kit, was enough to carry out the program?

- Didn't attend the launch x 5
- (Rosie explained.) (Manual was enough)
- I feel so
- PR exercise, it was not that good.
- Kit in mail (Lady mentioned, "Di")
- Definitely
- Already done info training
- Take the info, and use what you liked – flexible
- Good
- Binder was enough
- Basic enough to understand and do

—————> If no, should more specific training and/or information be given at the launch when you collect the kits?

_____ and if so, what type of training and/or information would you like?

- Yes
- No idea – ran through it.
- Guide line to start with, i.e. Step by step instruction on how to implement the program.
- Face to face – one on one good to explain needed it. Tend to leave it if get it in the mail
- O.K
- More resources on hygiene
- Practical application = activity based = hands on worksheets, songs.

APPENDIX D: COLLATED QUALITATIVE DATA

5. What did you think of the suggested taskline in the manual? (Was it reasonable? Was it flexible enough?)
- Was only assistant at time, unsure of taskline. (Had used the program but was unsure about what the taskline was)
 - It was fine
 - 6 weeks-think so-if longer would drag out. At first inconvenient – having to remember, needed certain amount of time to get into it.
 - Followed their own task line, they used it for a couple of weeks with hand washing grid, as to make it more flexible.
 - Yes x 4
 - Unsure
 - Hard to get through
 - Great
 - Chop and change to suit the centre
 - Easy to implement
 - Time to set up (allow time for the whole centre to be in it)
 - Stupid – unrealistic expectation due to time constraints
 - Can't remember
 - Did not have any problems
 - No special training was needed.

Parents involvement & the Hand Washing Grid (Questions: 13, 14, 15, 16, 17)

13. Did you use the **letter to parents** that was included in the kit?
- Yes
 - Did use the exact letter
 - Few changes e.g. CC to Community Kindy
 - Sent out own, used our own letterhead/format
 - Given to all parents
 - Lots of notes and newsletter
 - Parents already knew
14. How else did you encourage **parent involvement** during the program?
- Showed the parents the posters in the centre x 4
 - Gave them the monthly newsletters
 - Ask the children if they have washed their hands, and the parents will answer
 - Best thing to do is to go through letters, information about diseases in simple language
 - No encouragement
 - General talking though the children and what to do at home and discuss with the parents what the children had been doing in the day care centre in regard to *Germ Busters*
 - Informal information about the importance of hand washing and how and why *Germ Busters* was implemented.
 - Sent the *Germ Busters* resources home
 - Fill in the hand washing grid
 - Gave the parents the letter when they arrived to the centre, the parent involvement was good
 - One to once discussions with the parents, spoke to them in the afternoon
Parents amazed that they had to wash hands upon arriving and departing
 - Staff should talk to the parents individually (informal) x 2
 - Hand washing grid is the best way to involve parents
 - Sent home stickers
 - Reminders/leaflets

APPENDIX D: COLLATED QUALITATIVE DATA

15. What do you think could be done to improve the amount of parent involvement in the program?
- GUEST SPEAKER from the Health Department
 - Educate them through letters and posters
 - They need to be aware that the children are young and need to wash their hands
 - Note to parents in the schoolbag
 - Have an information booklet parents can look at in the centre
 - No idea, parents were well informed after all the letters sent home
 - Parents have to be aware about the *Germ Busters* and encourage them to participate
 - Talk to the parents and on a parent, so they would be more "keen" on doing it (hand washing grid)
 - Do not know, they are too busy, and it is a challenge to involve them
 - Explain the characters to them
 - Tags in or on their bags, so the parents will know
16. With regard to the **hand washing grid** activity, did you prepare a hand washing grid resource?
- Yes: 13 No: 2
17. Do you think this could be **improved** or made more user-friendly?
How?
- Do not know! X 3
 - Fine! X 2
 - Have a blank sheet with the child's name. This makes it more personal than just a number x 2
 - No!
 - It was basic enough, and that is what parents need.
 - Important to give the parents information about it.
 - It was ok, but make it more VISUAL and BIGGER X 3
 - Use different symbols for the morning and evening

Sequence Poster and Staff (Questions: 18, 21, 10, 11, 12)

18. Now some questions about the poster education session for the children.
Did you conduct these with the children?
- Yes: 14 No: 1
21. Do you think it was an effective resource?
- Make it bigger and brighter
 - Yes, but we made arrows from the wall to the sink to remind the children to wash their hands
10. Did staff actively involve themselves in carrying out the program?
- Put up hand washing information for staff near the basins etc.
- If no, why do you think this was?
- Too much paper work
11. Was an **information session** for **staff** held before the program was started?
- If yes, how did you do this?

APPENDIX D: COLLATED QUALITATIVE DATA

- Staff meeting – major points covered x 6
- Staff attended the launch informed the staff informally at a staff meeting
- 3 staff delegated the tasks to the rest of the staff
- Short meeting
- Group leading meeting and delegated the responsibilities
- Discussion with the leader (only two staff)
- Discussed in meeting and on an individual basis x 2

13. Did you hold an information session for parents?

- No, but put up newsletter reminder letters, sent home letters and information x 7
- Informal communication
- Parent meeting and handouts
- The parents had their own parent committee

UV Light Box (Question, 22)

22. Now some questions about the UV light box. Did you use the UV light box?

- 6 used it
- 9 did not use it

→ If yes, did you make your own or borrow one from the HP unit?

- Borrowed x 5
- Made x 1

→ If you didn't use the UV light box activity, why no?

- Do not know x 1
- Can not remember
- Time constraints, but it would be great to try out x 3
- It would be great (asked for one but it never came)
- Too much time to put it up
- Hard to access
- Laziness
- Recommend using early in the program and as a reminder in the end if they did not remember to do it in the beginning.

Sustainability (Questions 8, 9, 24, 25, 26)

8. Were there any particular barriers that prevented you from carrying on with the program after the evaluation finished?

- No, continued to use it, concentrated on the hand washing itself (9), but less focused
- Yes, we are too busy. Other things on the (yearly) plan
- Time constraints x 2
- Retrain staff
- Hand Washing Grid because the parents didn't have time to do it
- Make the kit smaller and not have so much to go through in the time frame

APPENDIX D: COLLATED QUALITATIVE DATA

9. Can you think of ways which it could be made **easier for you** to carry on with the program?

- Realistic goals, it takes a long time to change behaviour of 24 children
- Information through mail as reminders so it doesn't laps. Adults need reminders so they are getting used to it. Intense in the beginning of the year
- Get attention to GB when the new children start
- No, it was not difficult, and you still can copy for the kit x 5
- Regular supply; magnets and taking home resources
- Developed own management
- Need to be individualised, flexible x 2
- It has to be ongoing

24. Do you think that **ongoing information** about the program during the year would help your centre to carry on with *Germ Busters* in the longer term? _____

If so, what type of information do you suggest?

- Letters to parents about hand washing
- Reminders x 2
- Stickers x 3
- Stamps
- Whatever info possible
- Towards parents
- Maybe it would help
- Unsure
- Don't know, I've got everything it was all comprehensive
- Newsletters to staff and parents
- Activity sheets
- More info, regular info, update x 3
- Reinforcing staff
- For staff
- Refresh and review
- Ideas for the children
- Small packages during the year
- Anything to keep it going
- Had bug going around = therefore, revisited program to reduce the bug going around – effective to reduce bugs.
- Directed to family and staff, on why it is important and the procedure
- Vary resources in children's activity
- To children x 2
- Something every three months (not too much)
- Publications (new studies, directed info)
- Sheets for parents on hygiene practices – hint a them

APPENDIX D: COLLATED QUALITATIVE DATA

25. Which local childcare/early childhood magazines, newsletters and publications does your centre receive?

- Childcare Exchange
- Gold Coast Kids x 10
- Unsure x 2
- CIA
- Time
- Your child (but haven't seen for 6-12 months)
- Dept Social Services
- Receive Gold Coast Kids, Staff don't read it, but parents do
- Lady Gowrie
- Creche and Kindergarten Associations
- Newsibits and parenting bits
- Different Early childhood information

26. Are these available to staff? To parents?

- Newsletter/Both
- Both x 11
- On the front counter
- Staff