

The Digital Diary App Pilot Study

INTRODUCTION

During the Covid-19 Pandemic, there have been visiting restrictions in place across Paediatric Intensive Care Units (PICU). In the study site's PICU, visiting has been limited to parents and at times only one parent was allowed to visit. The impact these restrictions have had on family's experiences of PICU has not been explored. However informally, nurses have reported increased difficulties in nurse to family communications. A Digital Diary App was developed in conjunction with Fujitsu, in an attempt to improve the experience of the wider families of children admitted to PICU.

BACKGROUND

In 2019, 43% of PICUs in the UK offered 'patient diaries'(1). The study site has used patient diaries for a number of years, to fill in memory gaps for children and to update parents about care. The Digital Diary is an app whereby nurses can add journal posts, photos and achievement badges. Parents can log onto a web based portal to view posts on their own device, whether at the bedside or not. Parents can also invite extended family members to view the diary entries. The App also allows Nurses to send 'requests' to Next-of-Kin, such as 'Please could you bring in some more nappies'. As well as viewing the Diary on the Web Based Portal, Next-of-Kin can also view information about PICU and update their child's likes/dislikes/people important to them.

DIGITAL DIARY PATIENTS

The Study Site's PICU had **70 admissions** during the month long pilot study. Nurses offered the Digital Diary to parents of PICU patients in place of the usual paper diaries. **28 children** were added to the Diary during the pilot study.

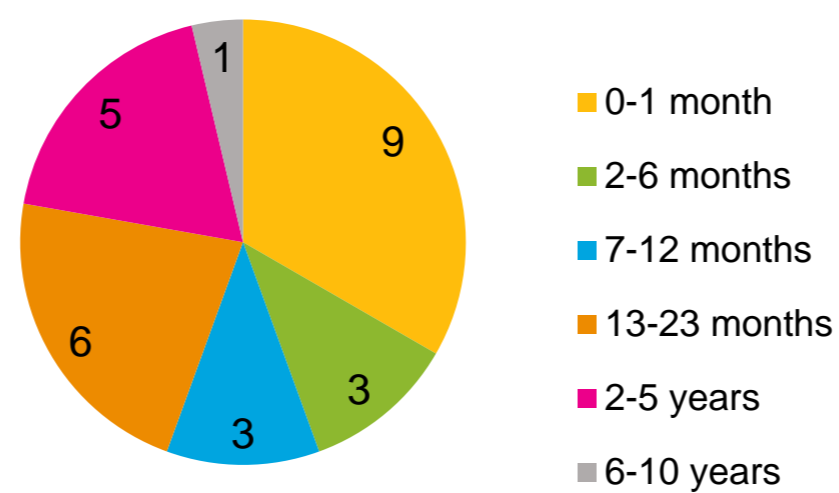


Figure 2. Age of Patients on Digital Diary App

39 'next-of-kin' and **12 extended family members** set up accounts to view their family member's diary on the Web Portal.

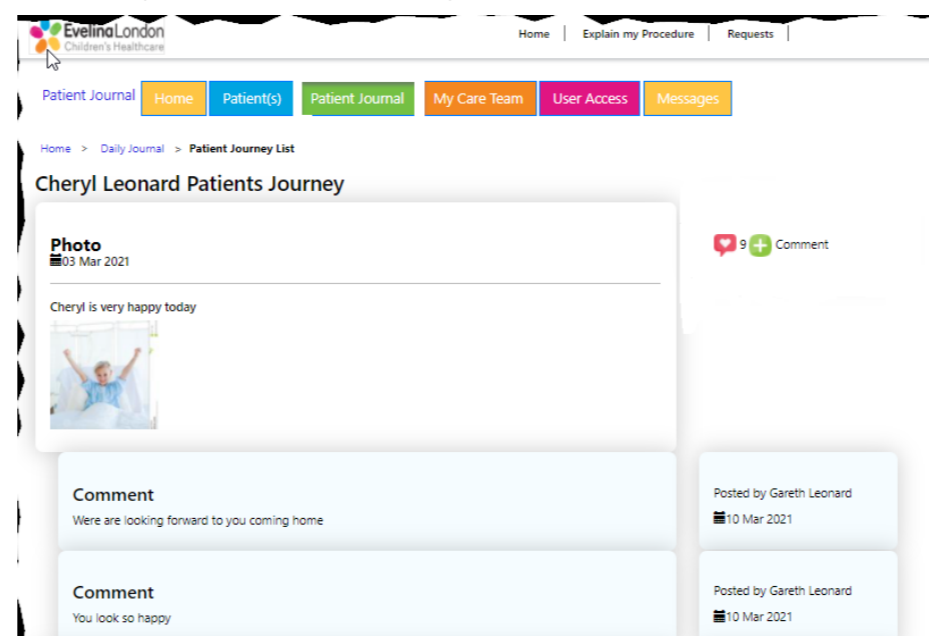


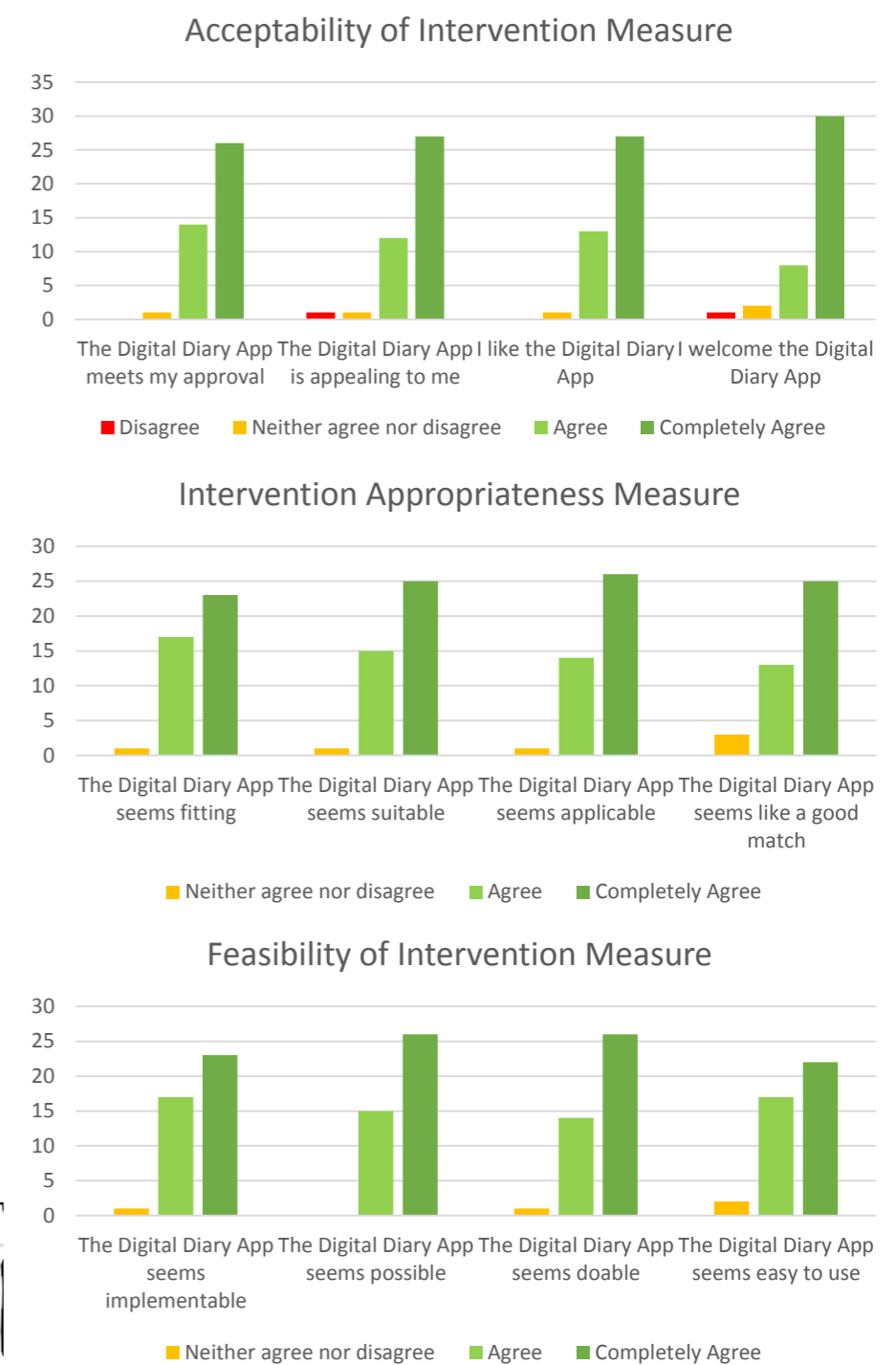
Figure 3. View of Test Patient's Journal on Digital Diary Web Portal.

METHODOLOGY

To evaluate the success of the pilot, Portal users (Next-of-Kin) and App Users (PICU Nurses) were invited to complete an evaluation questionnaire. The questionnaire used a validated tool to assess the appropriateness, acceptability and feasibility (2) of the Digital Diary App, as well as open-ended questions to determine whether the Digital Diary App supports the well-being of families, and the advantages and disadvantages of using the Digital Diary App compared to paper diaries.

RESULTS

41 participants completed the evaluation questionnaire (**28 Nurses, 13 Next-of-Kin/Family Members**). 16 participants have opted to take part in a telephone interview to discuss the Digital Diary App further (not yet conducted).



Figures 4,5 and 6. Acceptability, Appropriateness and Feasibility of Digital Diary App

85% of Next-of-Kin/Family Members said the Digital Diary App supported the well-being of their family, with 15% saying they were unsure.

'The digital diary has given both informative information from the nurses to document what my child has been through along with photos that we will always have.'

'The diary app was good at letting us know key elements of our daughter's care and made us feel confident she was being very well looked after.'

Nurses commented on the ease of use compared to paper diaries:

'Easier to use for a quick update, easy access for nurses and families. Allows real time updates which parents/ family member can access from any location. Easier to integrate and include photos.'

However, compared to paper diaries, Nurses thought the Digital Diary was:

'Not as aesthetically pleasing.'

'Less able to be creative.'

CONCLUSIONS

The Digital Diary App was well received both by bedside Nurses and PICU patient's families. Improvements to the App and Portal were suggested by users, which are currently being incorporated before the new version of the App goes live.

Patient Name	D.O.B.	Journey Type	Created On	Last 7 Days
Cheryl Leonard	21/07/2021	Photo	21/07/2021	31/08/2021
Cheryl Leonard	21/07/2021	Journal	21/07/2021	31/08/2021
Cheryl Leonard	20/07/2021	Journal	20/07/2021	31/08/2021
Cheryl Leonard	20/07/2021	Achievement	20/07/2021	31/08/2021
Cheryl Leonard	20/07/2021	Photo	20/07/2021	31/08/2021
Cheryl Leonard	20/07/2021	Achievement	20/07/2021	31/08/2021
Cheryl Leonard	20/07/2021	Journal	20/07/2021	31/08/2021
Cheryl Leonard	20/07/2021	Achievement	20/07/2021	31/08/2021
Cheryl Leonard	20/07/2021	Photo	20/07/2021	31/08/2021
Cheryl Leonard	20/07/2021	Journal	19/07/2021	31/08/2021

Figure 1. List of Journal Entries for Patient

OBJECTIVES

The Digital Diary App was piloted for one month (12/7/21-11/8/21) with the aim to:

1. Assess the appropriateness, acceptability and feasibility of the Digital Diary App.
2. Determine whether the Digital Diary App supports the well-being of families.
3. Assess the advantages and disadvantages of using the Digital Diary App compared to paper diaries.