**Supplementary Material S1:** Summary of the features of each domain and assessment criteria utilised

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| **Features** | | **Rationale of descriptions** |
| **Domain 1: The accessibility the mHealth apps in the app store(s)** | | |
| Updated in 2016 or 2017 | | Most updated features appropriate for AR and/or asthma |
| Available in both App store and Google Play store | | Allows the app to be used by individuals who own mobile phones that uses iPhone or Android devices. |
| **Domain 2: The alignment of mHealth apps with the theoretical principle of self-management of AR and/or asthma** | | |
| 1 | Symptom(s) Control Self-assessment | Assess disease control and outputs on a well-being scale or score telling the user how well-controlled their disease is |
| 2 | Symptom(s) Monitoring | Ability to keep a record and track symptoms and triggers. |
| 3 | Medication Reminders | Alerts user when it is time to take their medications. |
| 4 | Medication History Chart | Overview of presence of symptoms, severity of symptoms, daily peak flow measurements - collects data to demonstrate their AR and/or asthma control to their doctor |
| 5 | Doctor’s appointment reminder | A feature where a date can be input to receive a reminder of a doctor’s appointments |
| 6 | HCPs communication | Doctor report - allows users to email a report with information obtained from the medical history chart, a website or system available for HCP to monitor patient’s symptoms and quality of life as they enter data daily |
| **Domain 3: The usability of the mHealth apps using the Mobile App Rating Scale (MARS) instrument** | | |
|  | *Engagement* | Entertainment, Interest, Customization, Interactivity, Target group |
|  | *Functionality* | Performance, Ease of use, Navigation, Gestural design |
|  | *Aesthetics* | Graphics, layout, visual appeal |
|  | *Information* | Accuracy of app description, Goals, Quality of information, Quantity of information, Visual information, Credibility, Evidence-based |
|  | *Subjective quality* | Worth recommending, Stimulates repeat use, Willingness to pay, Overall satisfaction rating |