



Abstract Presentations

6. Chi Yan Hui, UK

Breathing and feeling well through universal access to right care

What features do patients and clinicians 'want' in the future Internet Of Thing (IoT) systems for asthma: a mixed method study

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Funder

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The A4A+ team

Principal investigator: Professor Hilary Pinnock
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Research advisor: Professor Brian McKinstry
Technology partner: Mark Buchner
Patient advisor: Olivia Fulton

Conflict of interests

CyH has no conflict of interest.
HP and BM have received grant funding from Philips NV.
MB is Managing Director of Tactuum Ltd.
OF contributes in a lay capacity to Teva Pharmaceuticals, AstraZeneca, WEGOHealth and is one of the patient and public involvement leads in the Asthma UK Centre for Applied Research

What do we know

Supported asthma self-management improves asthma outcomes and the Internet-of-Things (IoT) can support self-management with a broad range of applications (not only self-monitoring)

Our aim

We explored the 'connected' features that patients and clinicians want in order to support self-management.

What is an IoT system [1]?



Image reference:

[1] Santos GL, Endo PT, da Silva Lisboa MF, da Silva LG, Sadok D, Kelner J, Lynn T. *Analyzing the availability and performance of an e-health system integrated with edge, fog and cloud infrastructures*. Journal of Cloud Computing. 2018 Dec 1;7(1):16.

- We recruited patients and clinicians via social media and professional contacts.
- In-depth, think aloud interviews to explore opinions about preferred IoT features. Thematic analysis used the **Practical Reviews in Self-Management Support (PRISMS) taxonomy [2]**.
- Online questionnaire to triangulate the findings in the in-depth interviews.

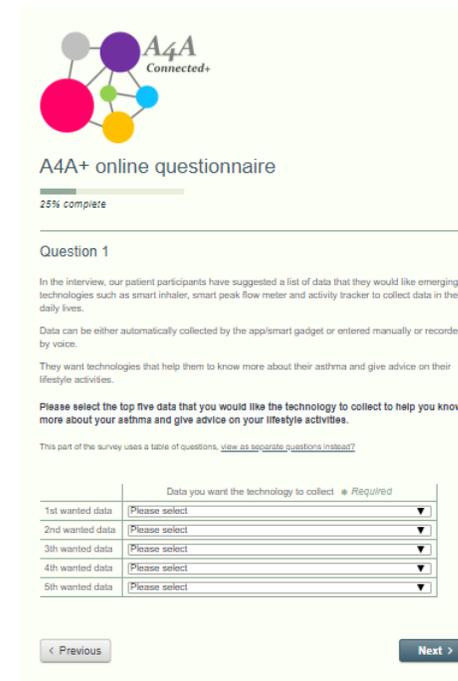
In-depth interviews



Prototype

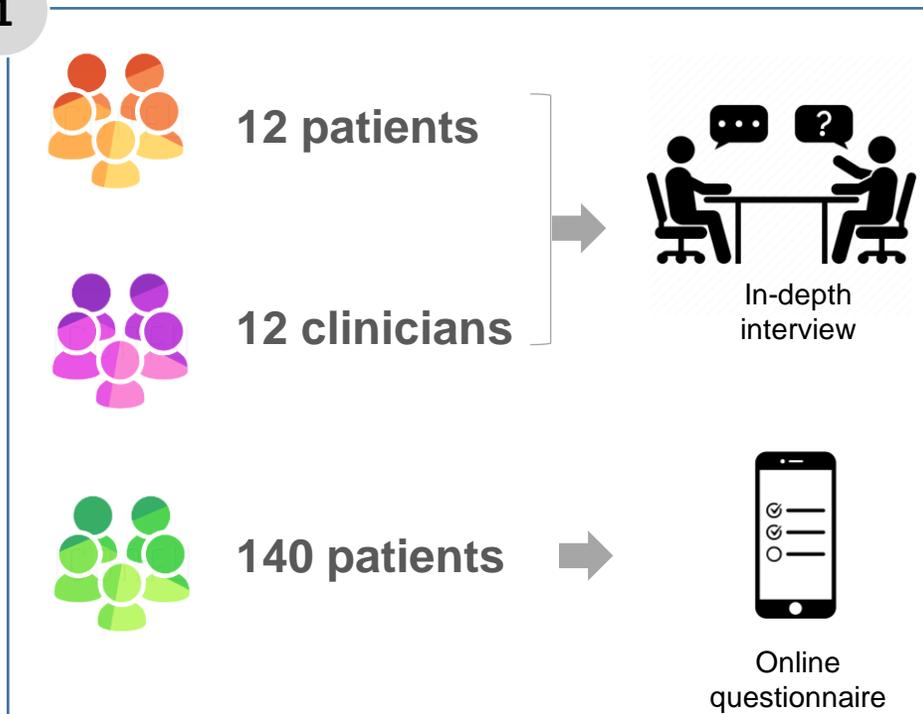


Online questionnaire

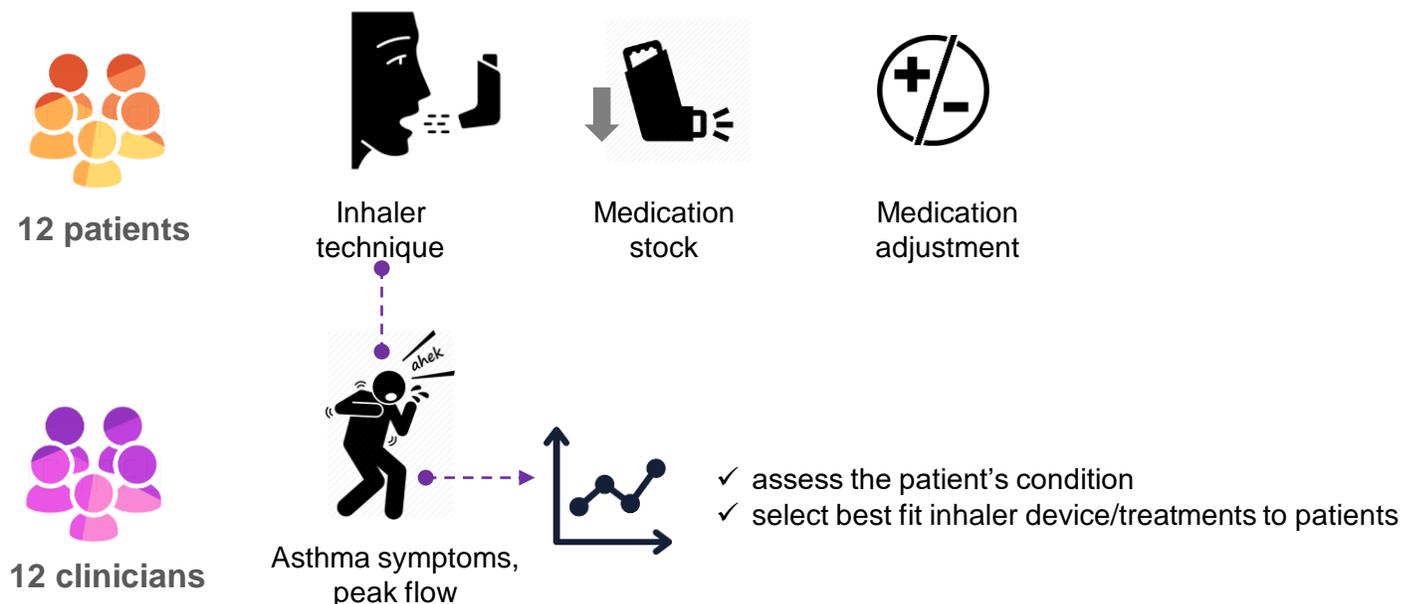


Reference: [2] Pearce G, Parke H, Pinnock H et al. The PRISMS Taxonomy of Self-Management Support: Derivation of a Novel Taxonomy and Initial Testing of Utility. J Health Serv Res Policy 2016 21: 73-82

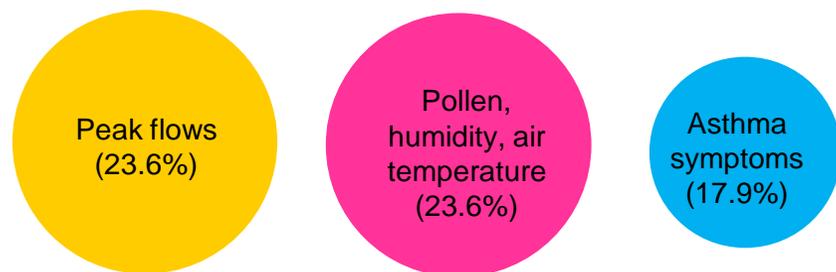
1



2 In-depth interview



3 Top 3 most wanted data type (140 patients)



4 Summary



Patients preferred 'passive' observation of their status (i.e. not requiring them to actively enter data), and wanted real-time advice to support their self-management decisions.

Both patients and clinicians want

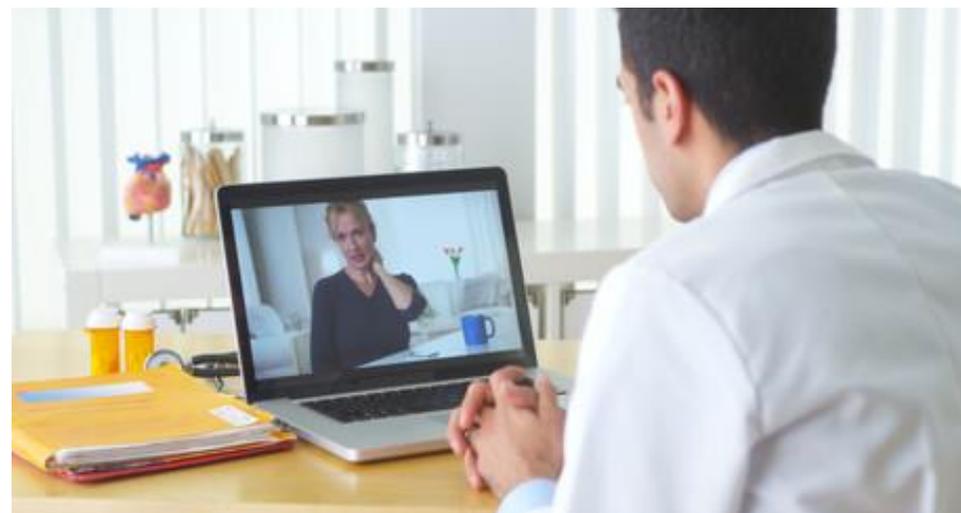
- ✓ more flexible consultations
- ✓ responsive step up/down strategies to maintain control and avoid unnecessary side-effects

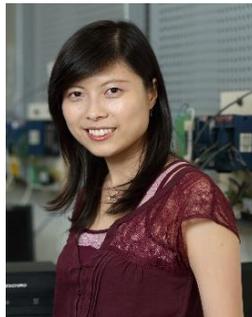


Conclusion

- We have identified a number of features to inform future connected IoT development.
- A 'silent' guardian IoT system is an option to support asthma self-management.

The utility of IoT systems in the post COVID-19 period to support self-management





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Thank you
Any questions?



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