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Recorded vignettes: a novel method for investigating documentation in the Electronic Healthcare Record (EHR)

Background

360 million consultations documented annually in England¹

Accurate descriptors required for **secondary data functions**

- Computerised decision support
- Financial reimbursement
- Audit
- Disease prevalence monitoring and research

Coding is **not explicitly taught** within the GP curriculum

How do you research how clinicians document?

- Previous studies: use real patients²/actors³ interacting with clinician studied
- **Lack standardisation**
- **Expensive**

Why Allergy?

- **Growing** clinical problem
- 2014 NICE guidelines⁴: **Poor clinical documentation is a major issue** in allergy
- EHR can't distinguish between intolerance and allergy
 - **Incorrect labelling** of patients
 - **Adverse impact on patient care?**
- **Little known about coding practices** in non-incentivised condition such as allergy

The CPRD, A data repository
2014: **181 papers published** using its data⁵
Quality Assurance: Tests **organisation/administration skills**
NOT quality of clinicians' documentation
Unquantifiable repercussions to accuracy and research quality

Method

A novel method developed to **standardize research** of EHR use



Filmed 6 short vignettes (21-50 secs)

Monologue of common allergic presentations as if in consultation with a doctor

Digital photographs were included to replicate rashes

Electronic distribution of study files

Documented vignettes in **their own EHR**

Returned screen-prints to the researcher for analysis

- Codes, free text and EHR functions

Questionnaire

- Exploring **decision-making** and **validation** of method

Initially piloted on 1 GP and 2 trainees leading to refinements

Results

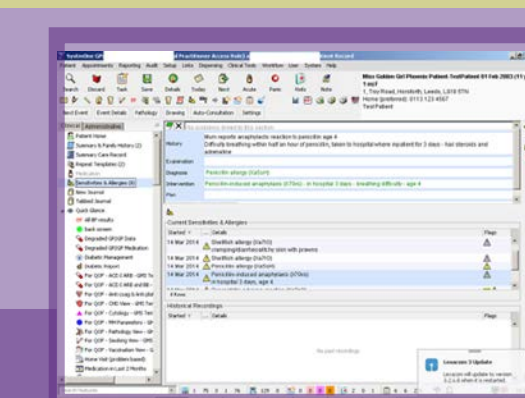
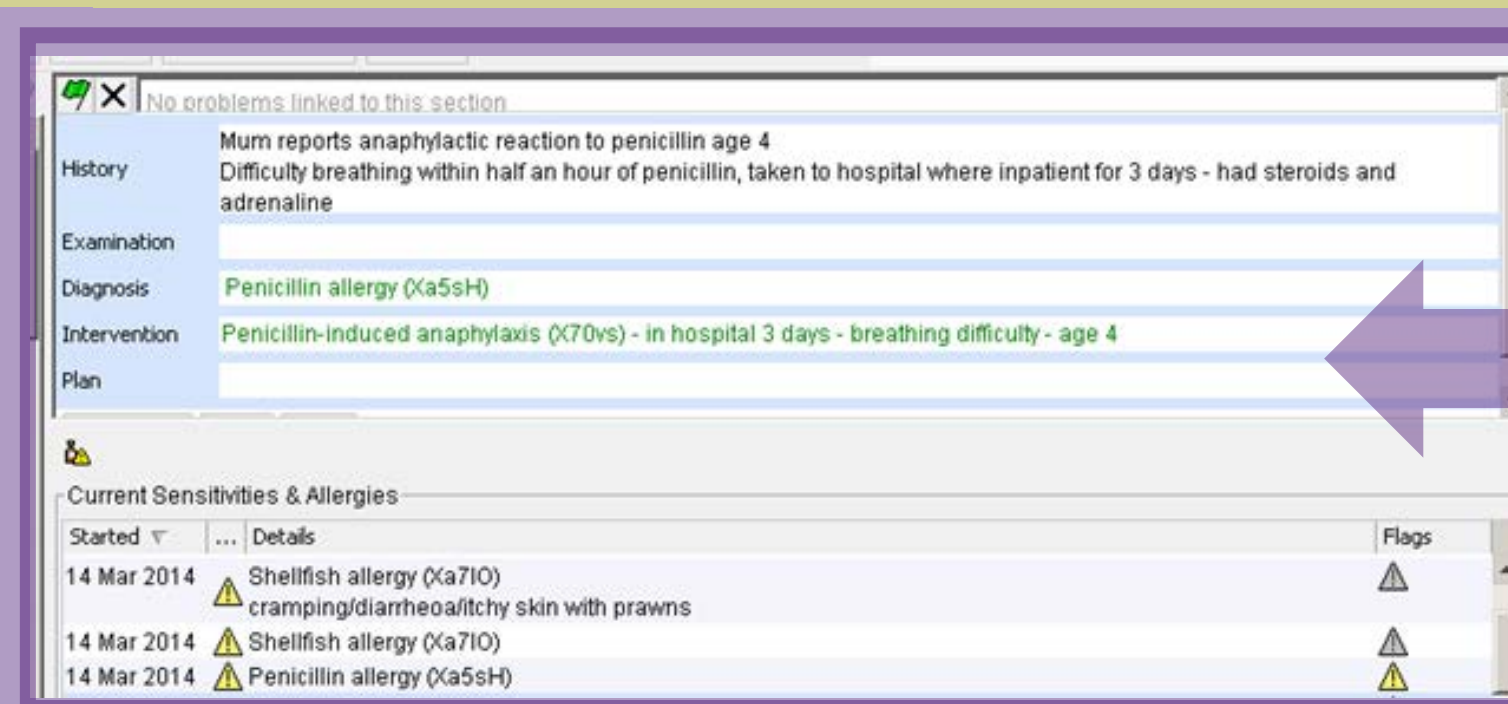
7 GPs and 15 GP trainees were recruited
All successfully completed

Data was returned from **4 different EHRs**

SystemOne (6), EmisLV (2), EmisWeb (6) and Vision (8)

Screen prints **effectively captured data** with **minor technical difficulties** reported by 2 participants

The study took **1 - 2 hours** to complete: longer than expected from the pilot study



	% Thought "Enough information to record consultation effectively"	Vignette quality out of 10 Mean (range)	"This vignette reflected real-life" (% agree)
Vignette 1	55%	7.6 (5-9)	91%
Vignette 2	44%	7.1 (2-10)	86%
Vignette 3	41%	7.9 (5-10)	100%
Vignette 4	41%	7.2 (4-10)	86%
Vignette 5	68%	7.8 (7-10)	100%
Vignette 6	68%	8.3 (7-10)	95%
Overall	53%	7.7 (2-10)	93%

Questionnaires explored reasoning behind code assignment

GP5Vig4: "This problem sounds like a viral cough (or ?smoking) **I don't want to medicalize it** by adding a diagnostic label."

More information desired to improve **confidence assigning diagnostic** (rather than symptom) descriptors:

GP7Vig1: "Any breathing problems? Faintness? Worsening severity of reaction each occasion?"

GP4Vig2: "More history and examination related to necklace (needed). Couldn't see clearly on photo."

Possible Sources of Confusion:
"Quality" medical, technical or acting?
"Does this vignette reflect real-life?"
the process OR patients' presentation?
Should be clarified in future studies

Strengths

Reduce variables associated with this area of research (eg history taking, communication skills & doctor-patient interactions)

Reproducible

Economical on a large scale

Different EHR providers can be researched

Simple: participants use their own EHR, in their own environment, at their convenience

Limitations

Refined monologues required for meaningful results

Photos must be high resolution

Participants require **up-to-date software** and degree of **computer literacy**

Discussion

Filmed vignettes are an **inexpensive, rigorous technique** for exploring how clinicians document

Viable method - Quantitative and qualitative feedback from 22 participants in allergy study

To reduce participants' time - Fewer vignettes per study, refinements to the instruction process

Monologues specifically vague to reflect initial presentations: identified in participant feedback

Future Potential - Significant for all EHR stakeholders

Professional training tool for GPs in documentation

Research training intervention

Impact on the **interpretation of studies utilising CPRD data?**

Use to **plan and validate CPRD studies:** identifying how clinicians document various presentations of the condition of interest to generate a likely range of codes

References

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