Changing trends in postoperative cataract care: The role of electronic records in facilitating a community optometrist-delivered shared care model in a rural Irish setting

Morgan Ann M. 1, PhD, Kerins Fidelta1, Dip, McKenna Barry2, Dip, Quinn Shauna2, FRCOphth, Mullaney Paul1, FRCOphth.
1Department of Ophthalmology, Sligo General Hospital, Sligo, Ireland
2Information Communication Technology Department, Level 4, Sligo General Hospital, Ireland

BACKGROUND
Cataract surgery is a high volume surgery, accounting for 1% of all daycare procedures or 12,000 surgeries per year in the publically funded healthcare system in Ireland1. Thus, it comprises a considerable healthcare burden, and this demand is expected to increase further as the population ages. Any reduction in the workload associated with cataract surgery may therefore have a significant health economic impact. This study evaluates a community optometrist-delivered postoperative care scheme in patients discharged from the hospital ophthalmology department following uncomplicated cataract surgery, and assesses the efficacy of electronic patient records (EPR) in facilitating co-managed cataract care.

AIMS
1. Assess completeness of clinical records using electronic patient records (EPR)
2. Identify if the introduction of EPRs is associated with a learning curve
3. Investigate if location of follow-up (community vs hospital) influences documentation

METHODS
• Retrospective analysis of a prospectively maintained database of postoperative cataract review data at Sligo General Hospital (SGH), which serves a large and predominantly rural catchment area.
• All patients undergoing cataract surgery at SGH from October 2012 to September 2013 were included in this study.
• A fully-integrated electronic patient record system was deployed across all participating optometrist and hospital sites, comprising Medisoft Ophthalmology, which replaced the paper notes of assessments and operations.
• A total of 39 optometric practices, all with access to the Medisoft EPR software, participated in this pilot co-management scheme.

RESULTS

Figure 1: (A) Comanagement protocol. Community optometrists within this catchment area were invited to enroll in the shared care scheme and attended an information session outlining the patient pathway, completion of the EPR, identification of postoperative complications and procedures for re-referring patients with postoperative complications as well as patients requesting second eye cataract surgery. Patients undergoing routine uncomplicated cataract surgery and having no significant ocular comorbidities were discharged to the community scheme. Patients with postoperative complications were referred back to the hospital via telephone to the nurse specialist to arrange an appropriate further appointment at the hospital ophthalmology unit or to the 24-hour emergency walk-in service. Patients who had intraoperative complications or in whom there were significant ocular comorbidities were followed up in a doctor-led clinic, and discharged or listed for second eye surgery as appropriate.

Figure 2: Follow-up location influences completeness of clinical record.
(A) 524 patients were due to attend hospital follow-up, 435 of these had documented attendance on EPR. 89 patients were due to attend community follow-up, 747 of these had documented follow-up attendances on EPR. Comparison of patient cohorts was performed using Fisher’s exact test. A p value of ≤0.05 was considered to be statistically significant.
(B) Clinical records were more likely to be complete if performed by an optometrist (RR=1.934, p<0.0001).
(C) Doctors were more likely to document follow-up plan following first eye surgery compared to optometrists (RR=1.434, p<0.0001).

Figure 3: The introduction of EPR may be associated with a learning curve.
(A) Comparison of patient cohorts in the first six months compared to the second six months was performed using Fisher’s exact test. A p-value of ≤0.05 was considered to be statistically significant.
(B) At least three clinical parameters were documented more frequently in the second time period compared to the first (RR=1.10, p=0.0007). A p value of ≤0.05 was considered to be statistically significant

CONCLUSIONS
- Optometrists provided an excellent postoperative care service and were more likely to have complete clinical records compared to hospital doctors.
- The introduction of EPR may be associated with a learning curve.
- EPR facilitates a postoperative shared care pathway that is of high quality and efficiency with major economic advantages.

REFERENCES

Table 1: Completeness of Clinical Records

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<thead>
<tr>
<th>Parameter</th>
<th>Time period 1 (n=296)</th>
<th>Time period 2 (n=307)</th>
<th>RR</th>
<th>95% CI</th>
<th>p Value</th>
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<tbody>
<tr>
<td>Refraction documented</td>
<td>81% (238/296)</td>
<td>94% (282/307)</td>
<td>1.10</td>
<td>1.04-1.17</td>
<td>&lt;0.0001</td>
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