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Is electronic referral system an answer for better co-ordinated inpatient diabetes care?

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BACKGROUND

A previous service level audit (2017) at a large district general hospital showed that new electronic referral system found dramatically improved timely access to specialist diabetes/endocrine advice.

AIMS:

Re-audit of an Endocrine referral system to:
1. Analyse the system's efficiency, one year post-implementation
2. Identify potential service gaps and service improvement areas

METHODOLOGY

We re-audited the system by retrospectively analysing the referral audit trails from July to December 2018 (6 months). We extracted the response time for each Endocrine referral request during this timeframe and re-analysed the efficiency of the electronic system compared to the paper referral system and previous year's performance.

The primary outcome measure was the percentage of referrals responded to in 24 hours.

The category of the responder (e.g. DSN, Endocrine Consultant etc) was also analysed to identify the distribution of workload within the department.
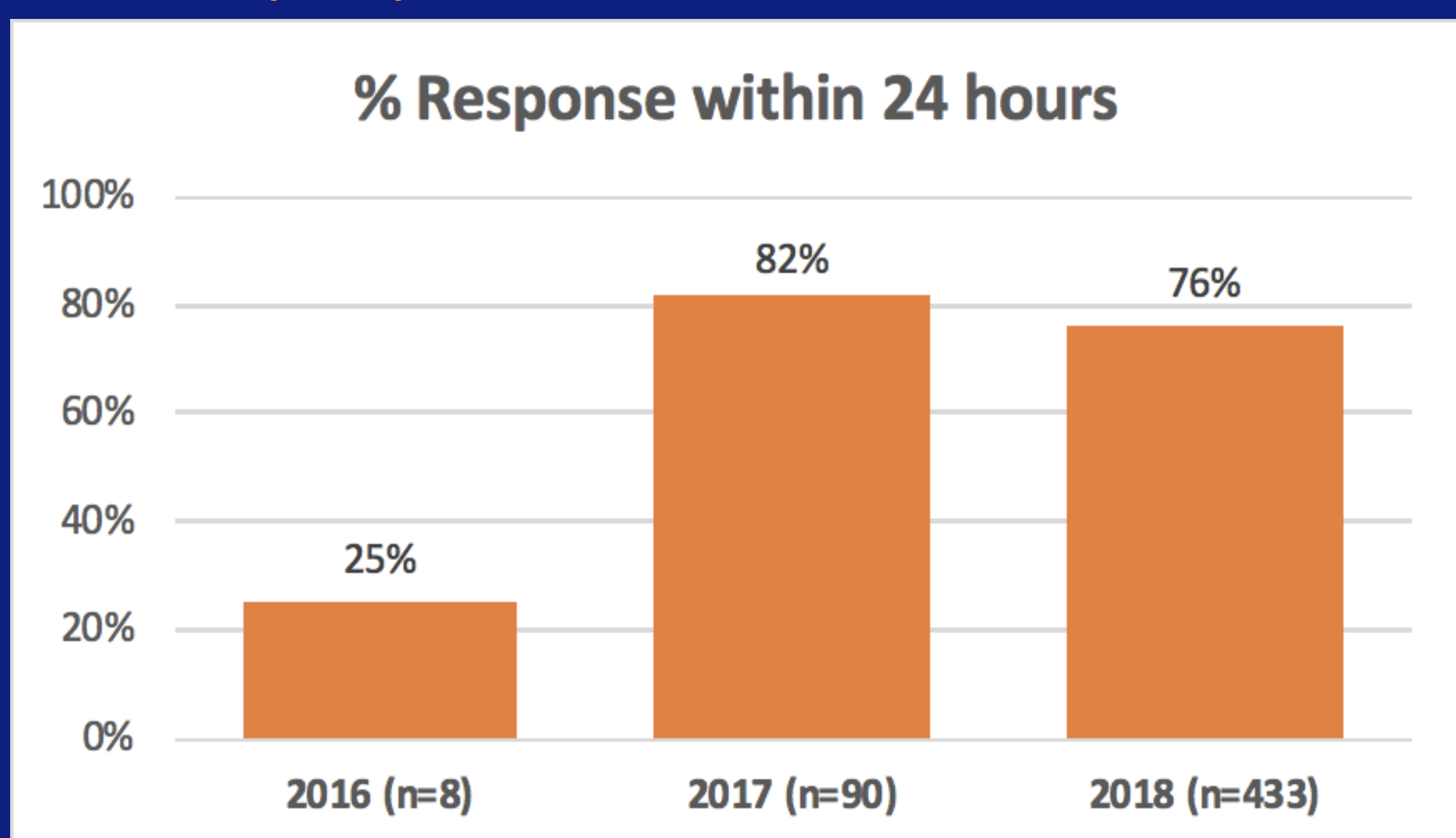
RESULTS (n=40)

Figure 1: Bar Chart depicting the percentage of referral requests responded to within 24 hours in 2016 (n=8), 2017 (n=9) and 2018 (n=433).
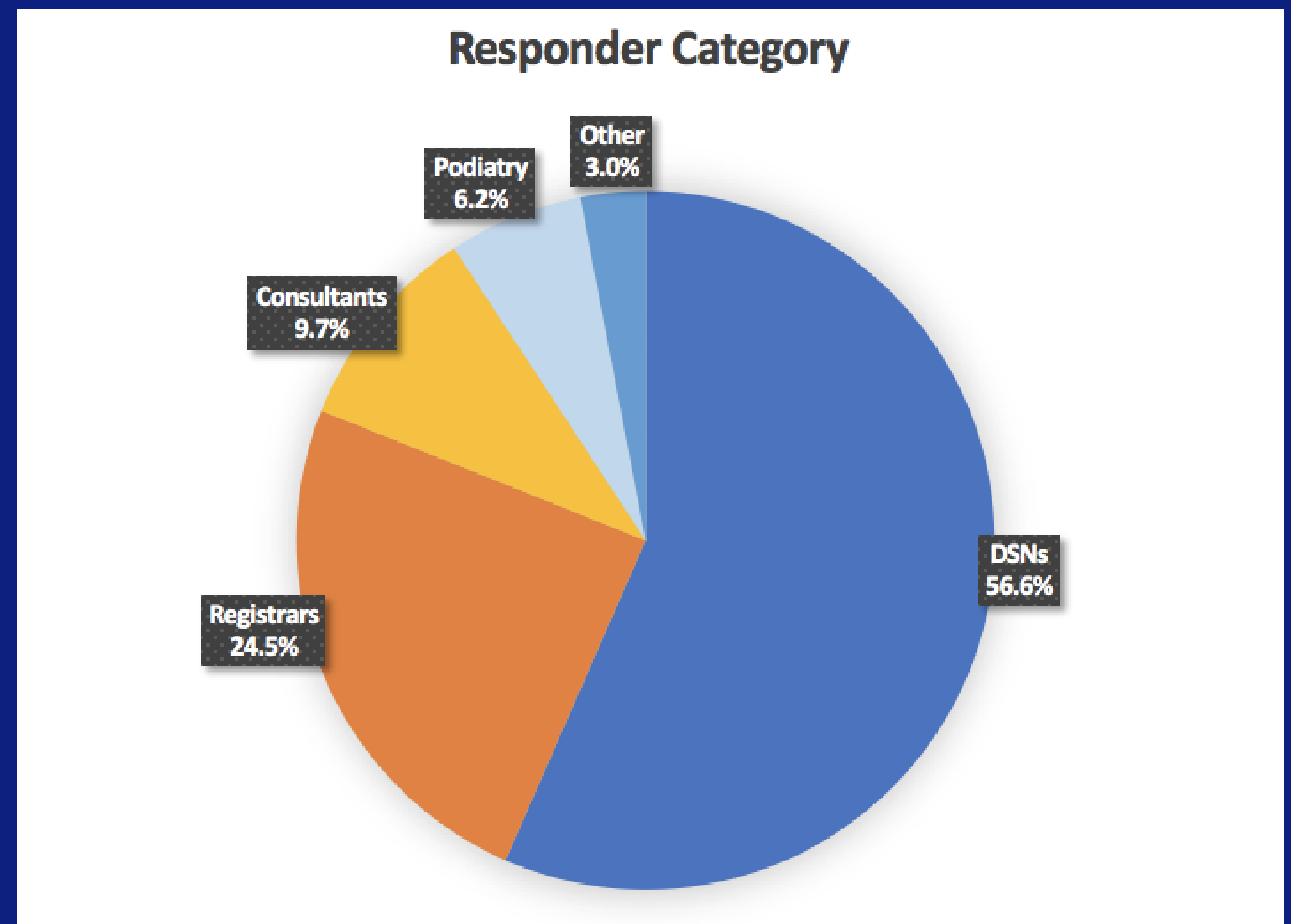

Figure 2: Pie chart depicting the % of responders belonging to each category. DSN = Diabetes Specialist Nurses

DISCUSSION

Figure 1 shows a *228% increase in percentage of requests responded to within 24 hours between 2016 (paper system) and 2017 (1st year of electronic system), and 204% increase between 2016 and 2018 (2nd year of electronic system).*

The marginal decrease in the proportion of responses within 24 hours between 2017 and 2018 suggests a bottleneck at the point of referral authorisation, as referral numbers have increased but workforce size has remained constant.

Furthermore, *Figure 2* shows that the main responders are Diabetes Specialist nurses, who deal with the majority (56.6%) of the referrals.

This suggests a potential benefit to hiring more DSNs (as the main responders), and redistributing workload.

Limitations:
The study was limited by its retrospective nature, and by difficulties in comparing like-for-like time periods. Potential improvements include streamlining the "accept referral" function and making a "report" function available, so referral outcomes can be viewed easily online.

CONCLUSION AND RECOMMENDATIONS

Our re-audit shows response times using the electronic system have remained similar, providing a strong case for continued use of this system as a superior alternative to paper referrals.

This audit shows implementing an electronic system leads to faster response times; all hospitals with electronic investigation-ordering systems could easily replicate this system.