

A comparison of referral patterns between nurse practitioners and family physicians: the case of e-Consult

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Introduction

A nurse practitioner (NP) is a registered nurse who has received additional training and qualifications in order to offer primary care in a manner similar to a family physician, but with a limited scope of duties (van Soren et al., 2009). In some regions of Ontario, NPs follow patients regularly and ensure their access to health care. However, NPs can only prescribe a limited number of drugs and laboratory tests on their own, and generally need a medical doctor (MD) to sign off on their prescriptions (HPRAC, 2008). There are reports that certain legislation and lack of funding for NP support hamper the quality of care they provide (Donald et al., 2010).

Current literature indicates that one of the legislative problems with NPs is that a specialist gets paid less for a referral from a NP than for the same referral coming from a MD (HPRAC, 2008). This affects the care NPs can offer, because specialists have an incentive to prioritize referrals from MDs. The difference in reimbursement for NP referrals raises the question of whether referral patterns of NPs differ from those of MDs. No literature exists on the subject. However, further knowledge on the subject could help frame legislative reform by informing as to whether differential reimbursement is justified.

E-Consult is a new online platform being piloted in the Champlain health region, that allows referrals to be done online rather than in person. With e-Consult, specialists are reimbursed the same amount, whether a NP or a MD makes the referral (Liddy et al., 2013). Using data from the e-Consult pilot, this paper compares NPs and MDs in terms of 1) the overall NP/MD perceived usefulness of e-Consult for patients and 2) for themselves, 3) the outcomes for patients in terms of course of action, 4) the likelihood that a face-to-face consultation was avoided and 5) the specialties referred to.

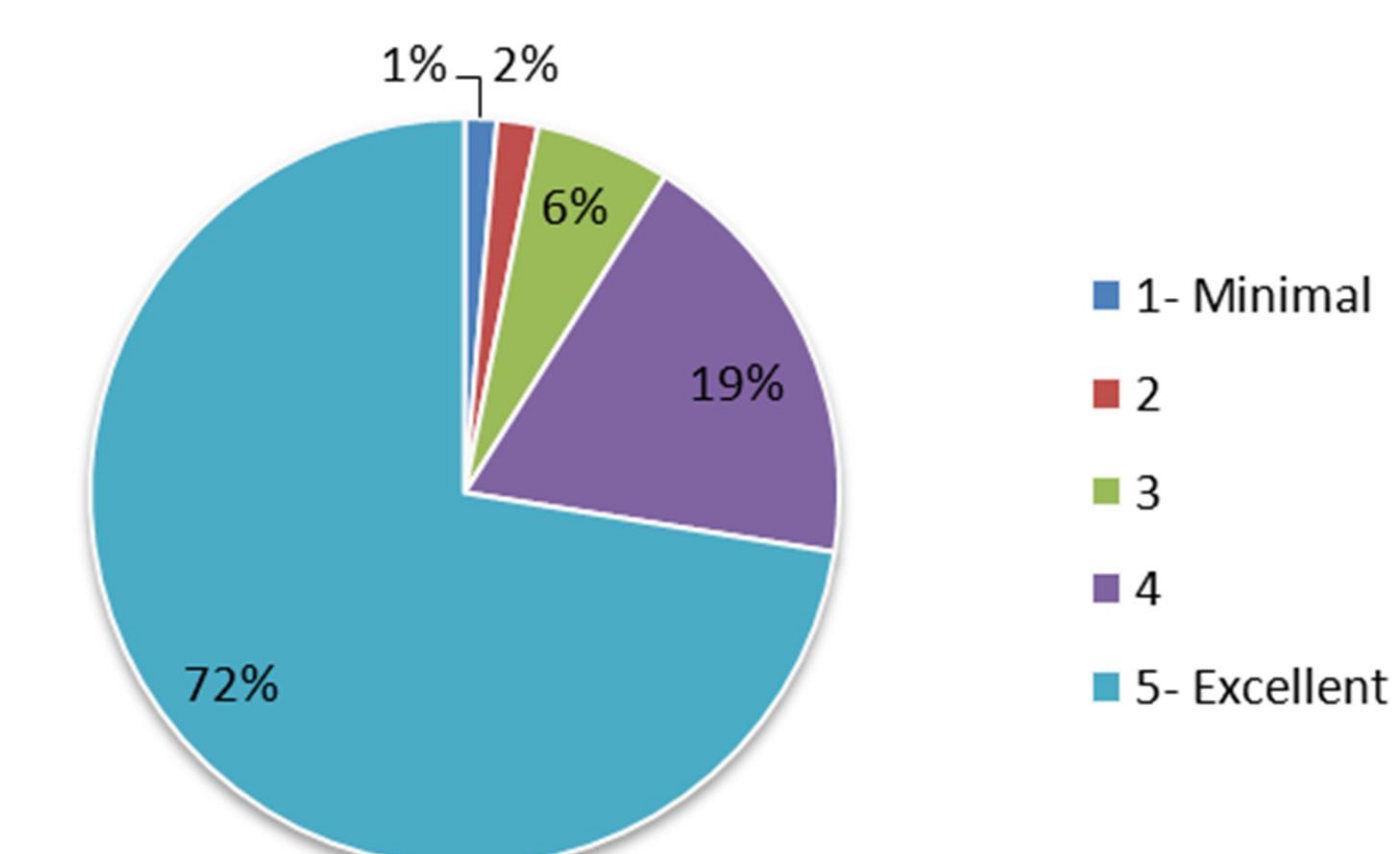
Data and methodology

This study makes use of data collected for 2,052 consultations (305 from NPs and 1,747 from MDs) over the period of April 15, 2011 to December 31, 2013.

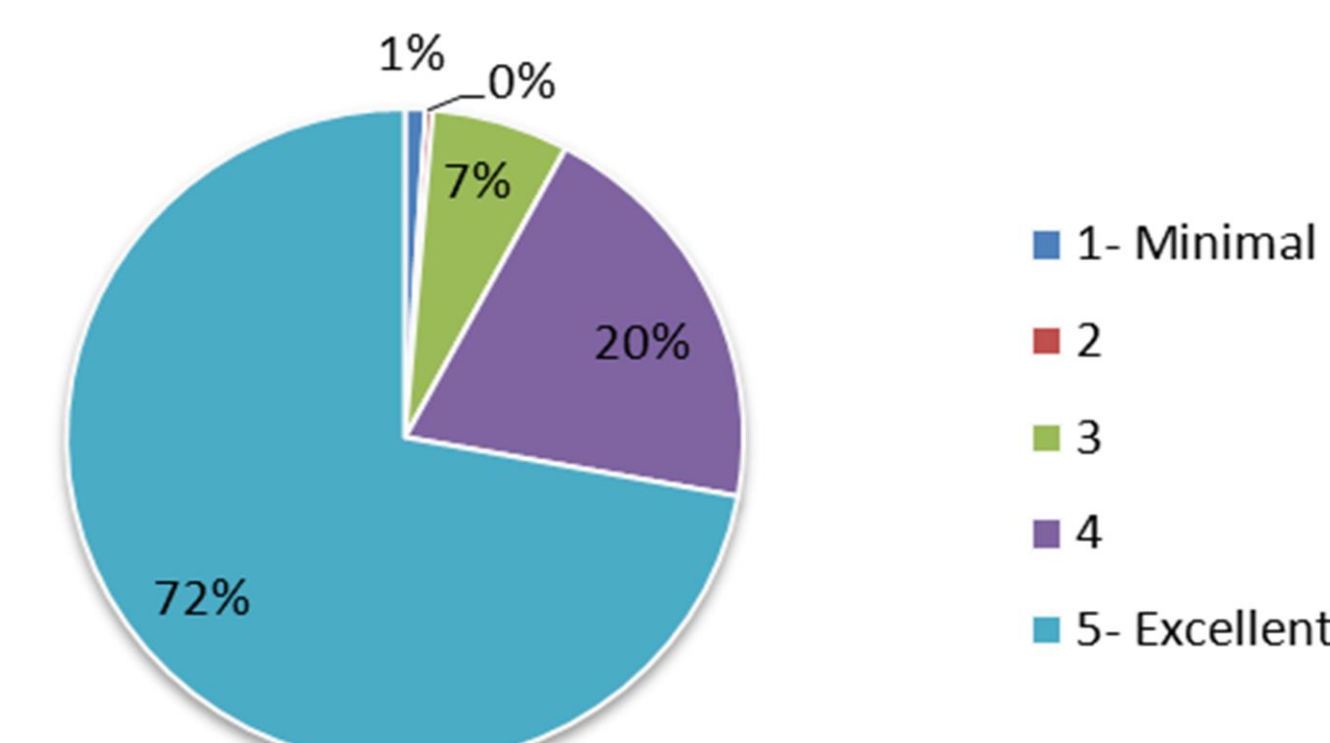
Comparisons were made using information collected as part of online surveys conducted following each consultation. The primary care practitioners (PCPs) were asked to rate the overall value of the e-Consult service for their patient and for themselves on a scale of 1-5, 5 being excellent. The mean answers were calculated for the referrals from NPs and the referrals from MDs. A t-test assuming equal variation was used to verify the statistical significance of any difference found. PCPs were also asked about the outcome of the use of e-Consultation in terms of course of action (possible answers were: 1. I was able to confirm the course of action I had in mind, 2. I got new advice for a new additional course of action, 3. I did not find the response very useful and 4. None of the above) and whether a face-to-face referral was avoided as a result of e-Consult. The responses being qualitative rather than quantitative, a chi-square test was used to assess the differences in distribution.

Finally, the difference in the distribution of specialties referred to by NPs and MDs was assessed using a chi-square test.

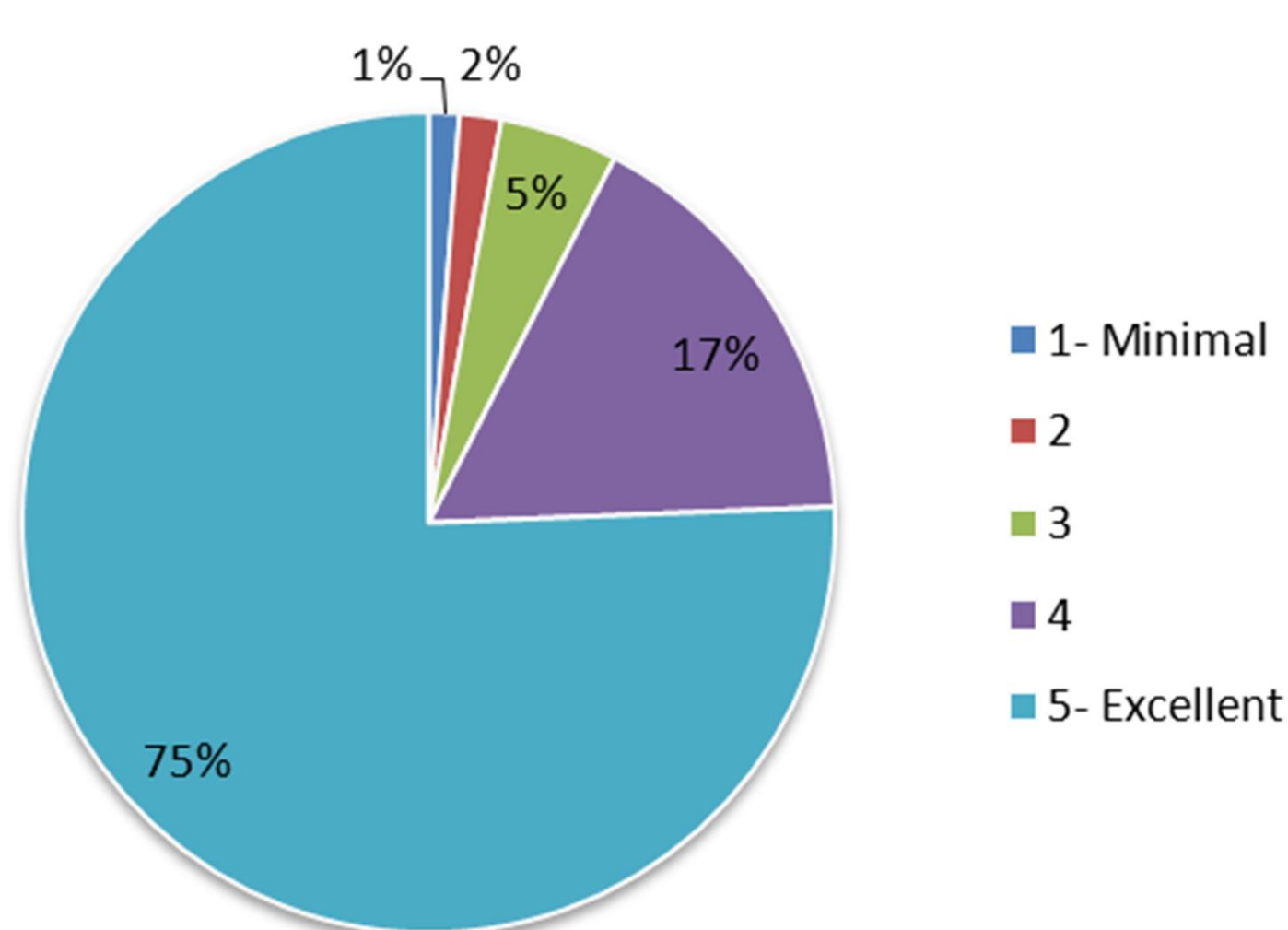
MD: Overall value of the e-Consult service for the patient



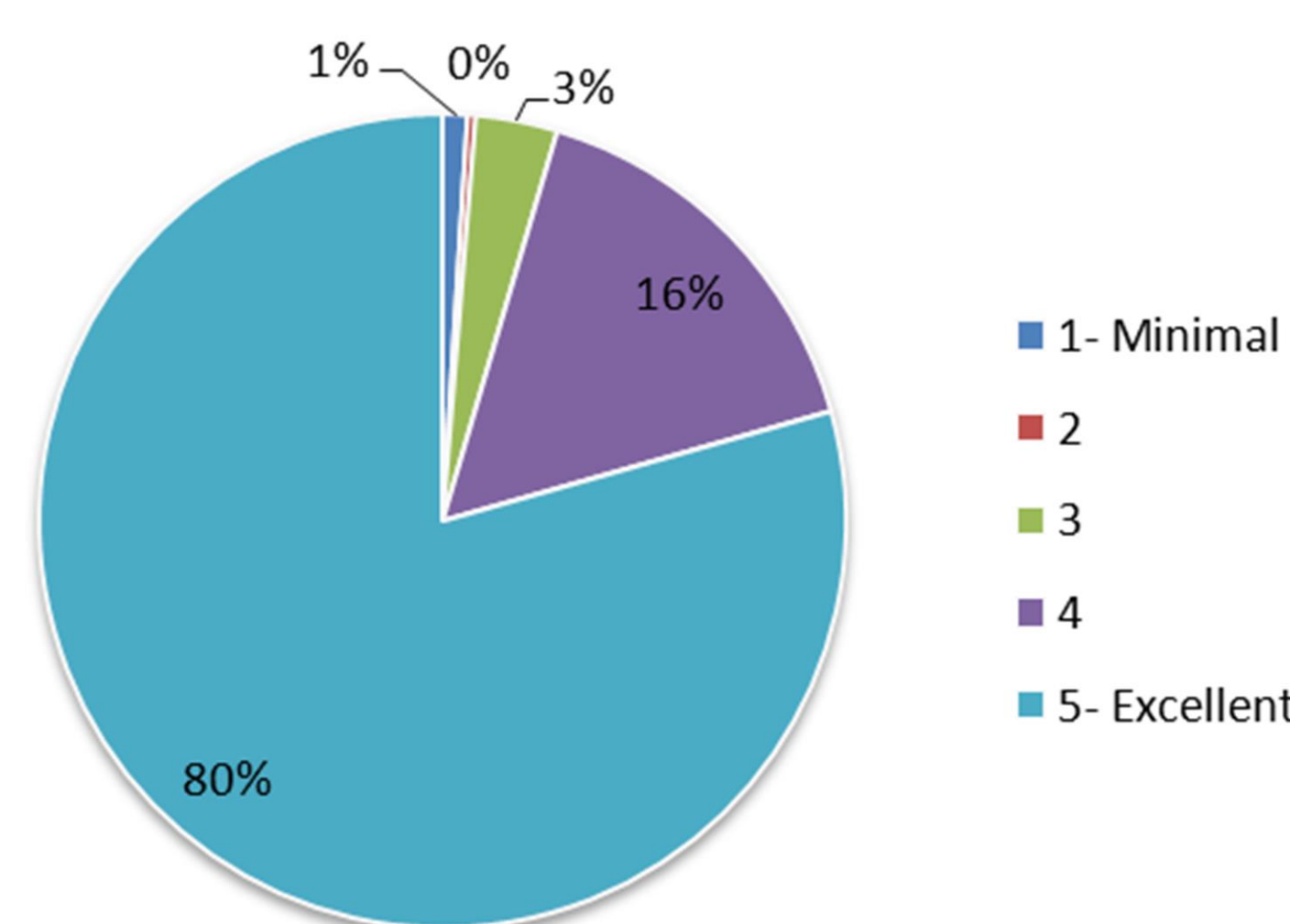
NP: Overall value of the e-Consult service for the patient



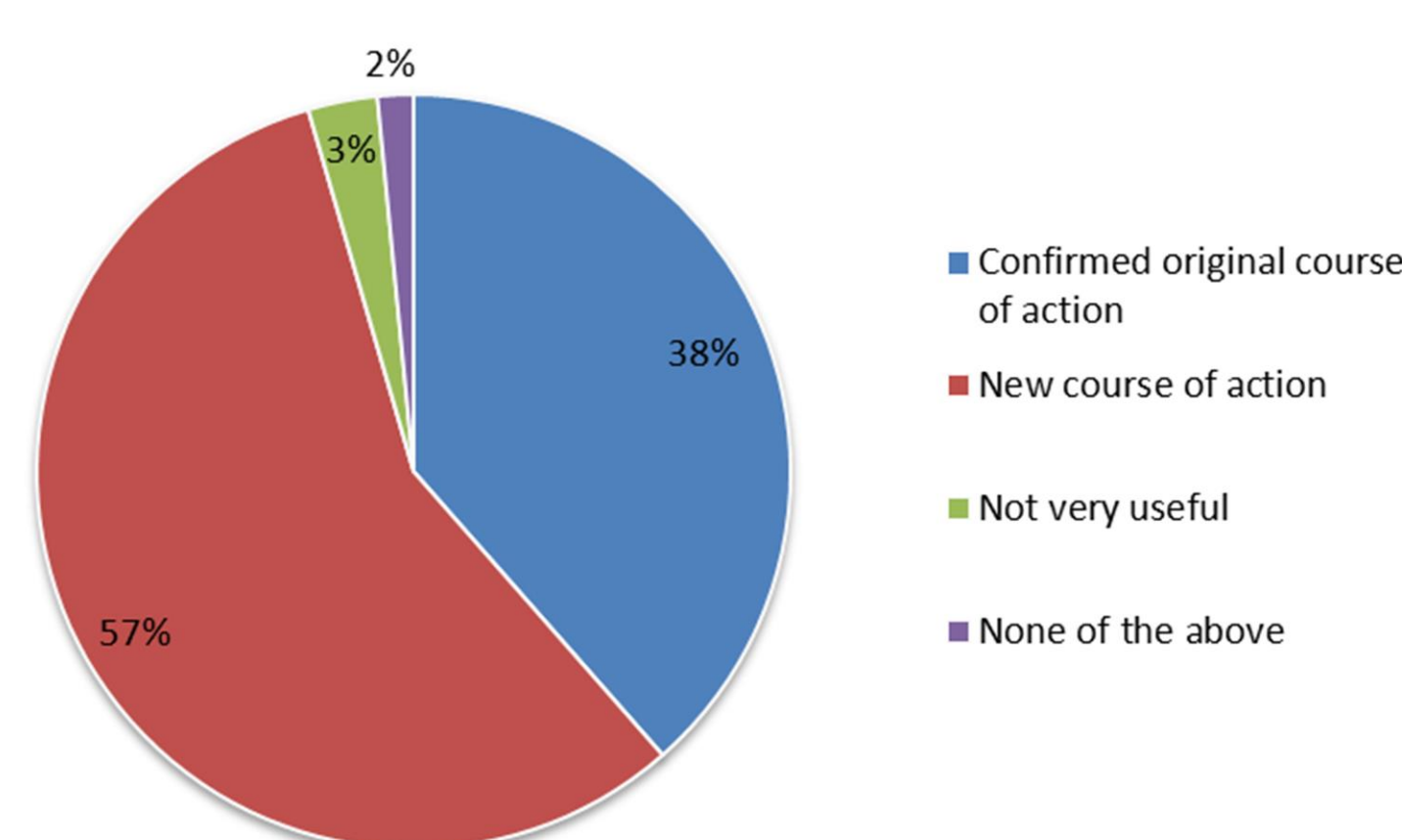
MD: Overall self-reported value of the e-Consult service for the primary care provider



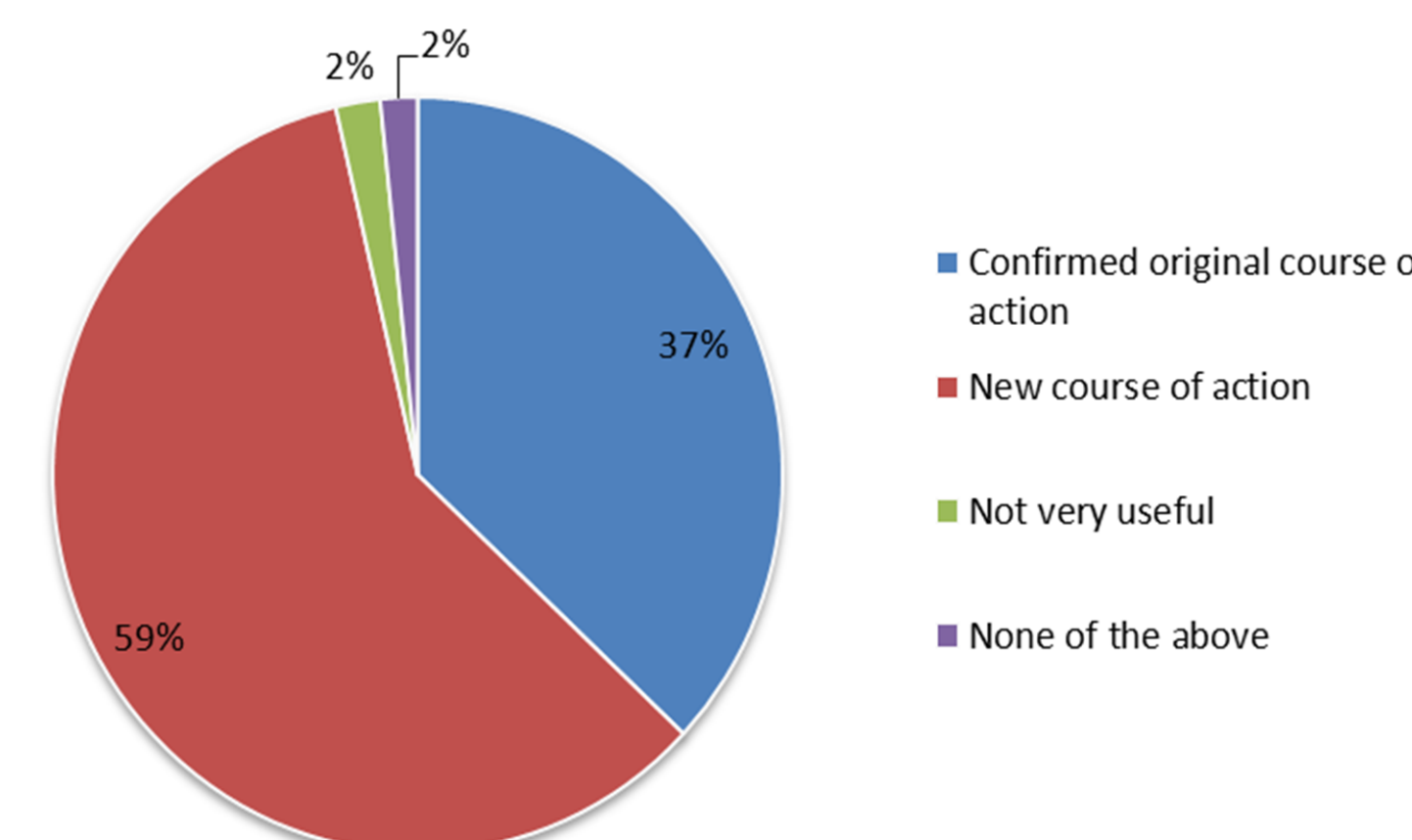
NP: Overall self-reported value of the e-Consult service for the primary care provider



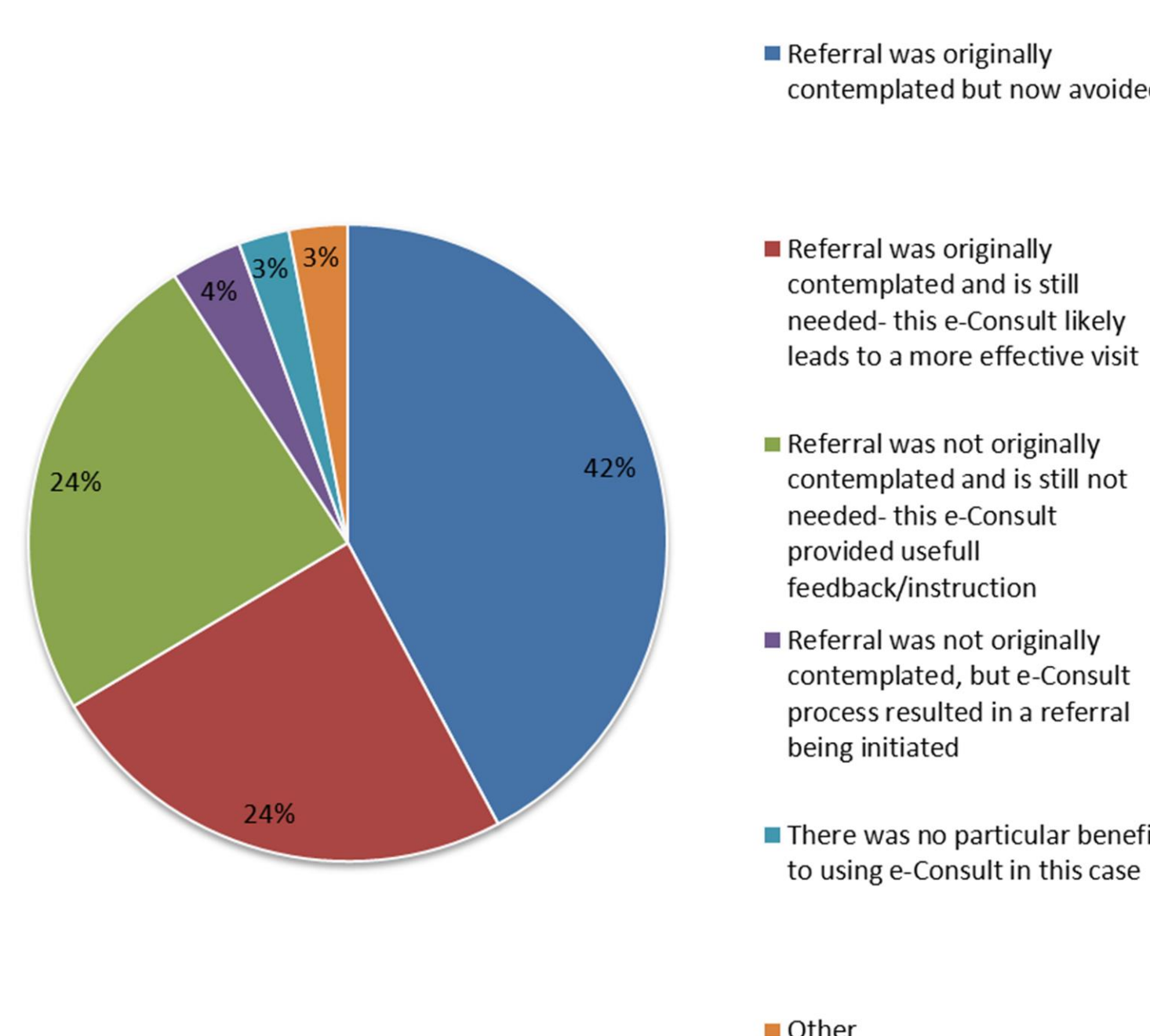
MD: Outcome for patient



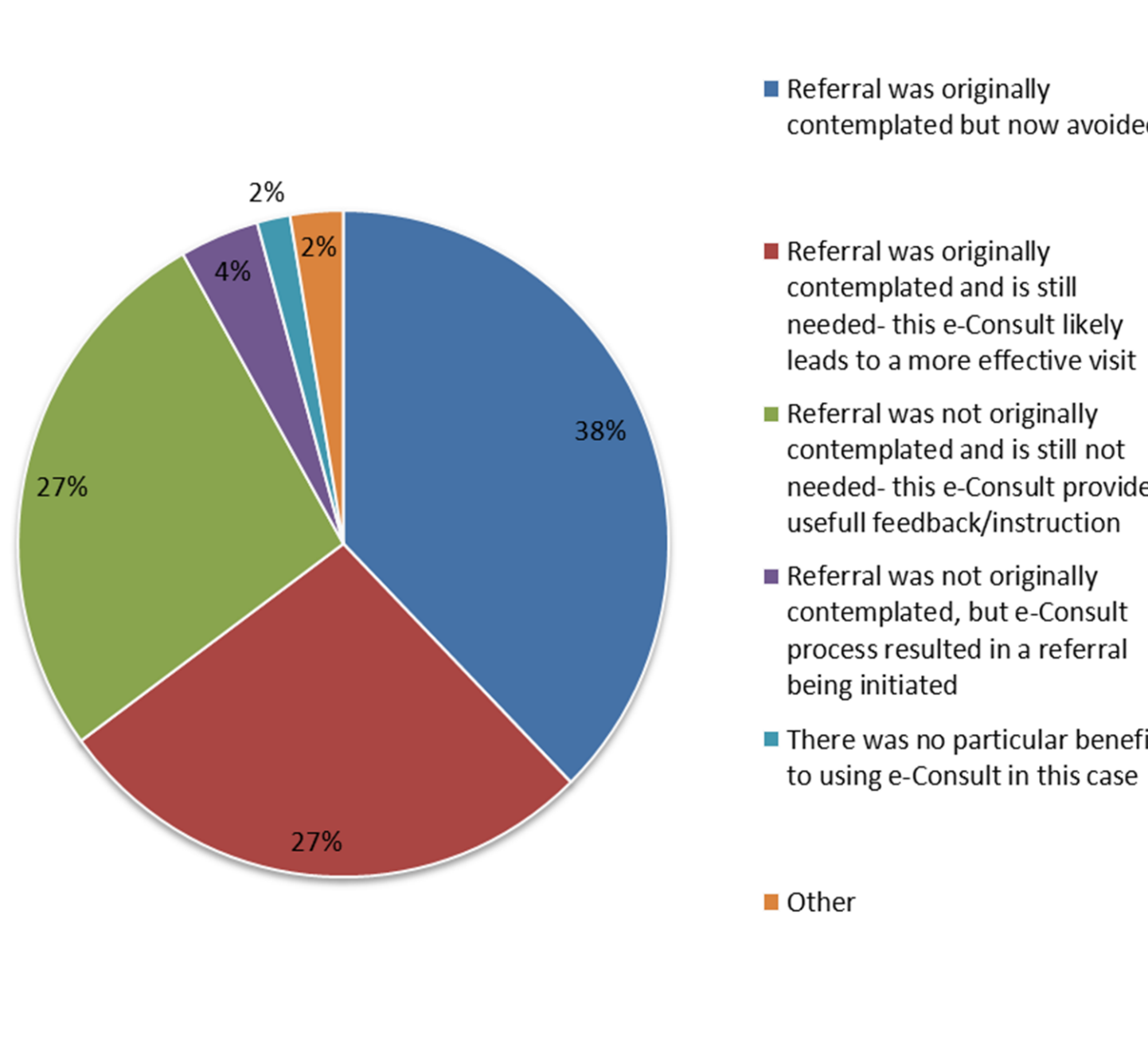
NP: Outcome for patient



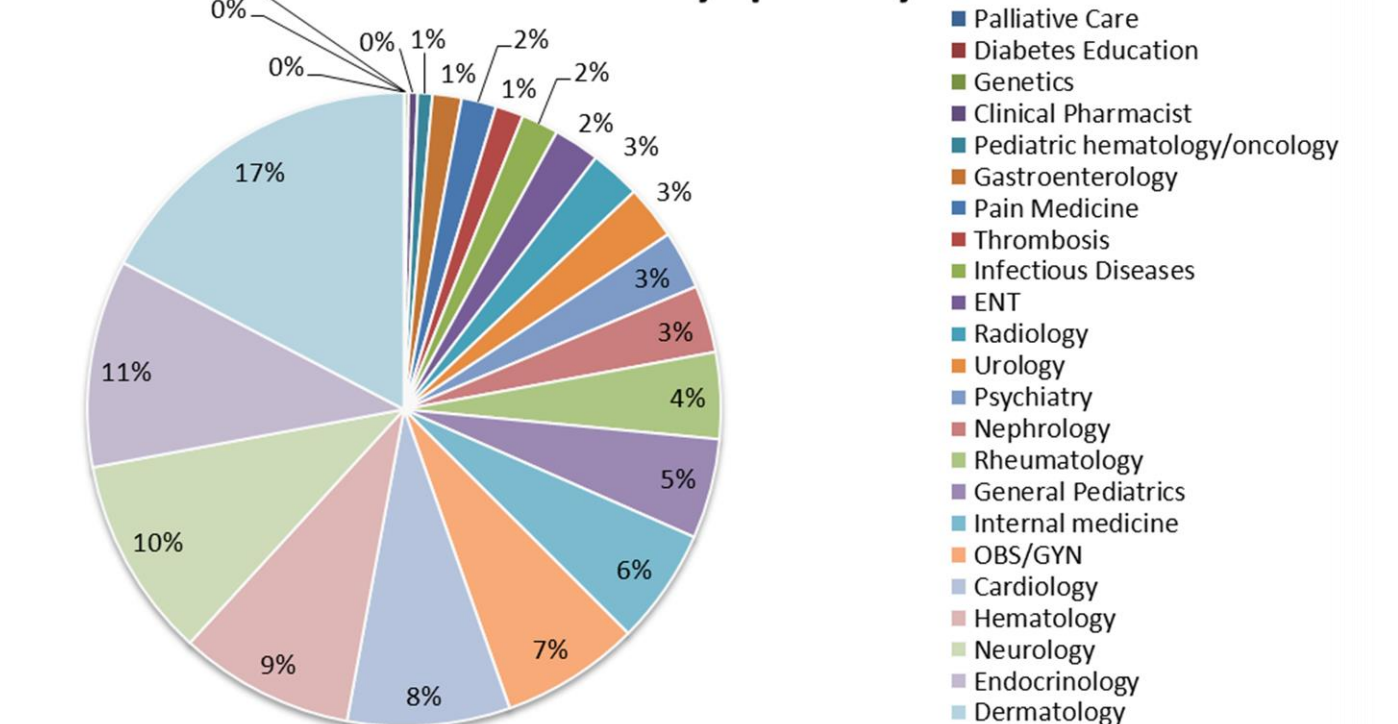
MD: Likelihood that a face-to-face consultation was avoided



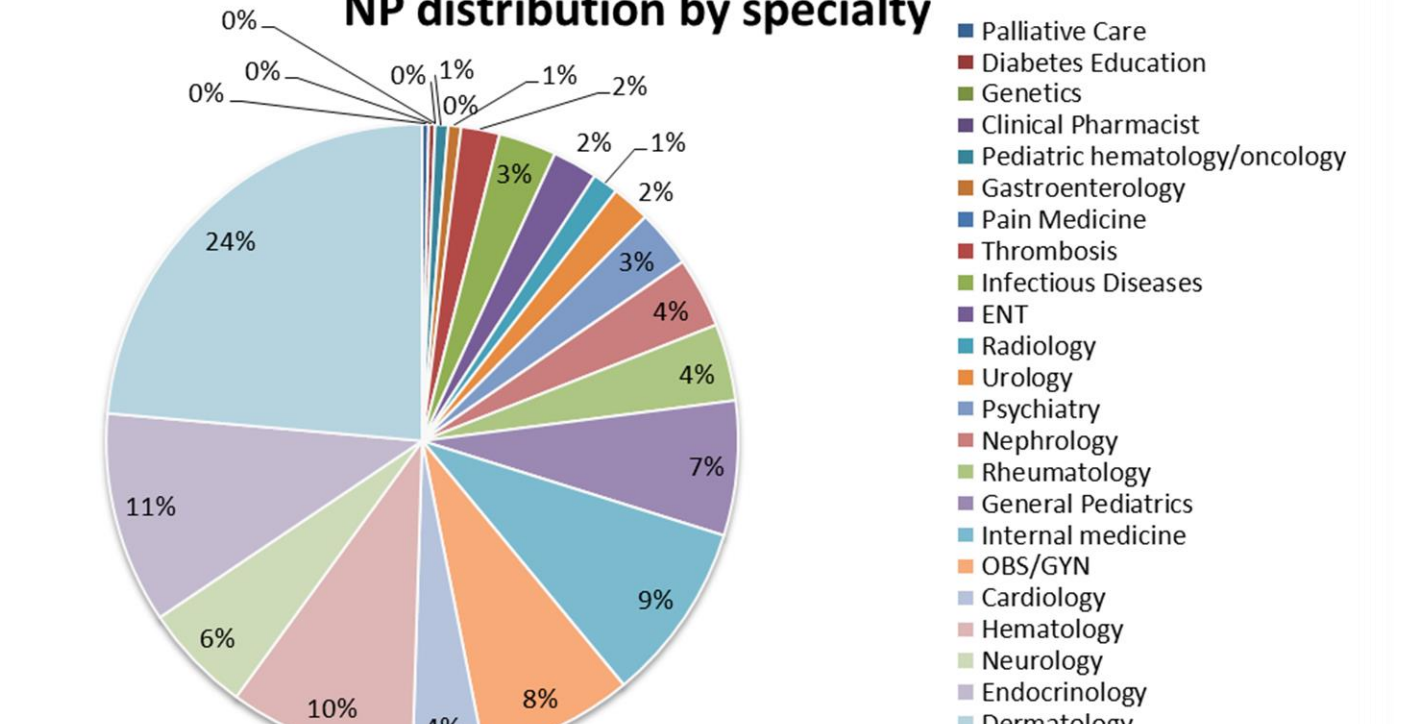
NP: Likelihood that a face-to-face consultation was avoided



MD distribution by specialty



NP distribution by specialty



Discussion/ Conclusion

In general, little difference in referral patterns and perceived benefit was found. Both NPs and MDs reported a mean value of 4.6 out of 5, when it comes to the value of e-Consult for their patient, and similar values (MD: 4.6, NP: 4.7) for the self-reported value for themselves. A high value for p (p=0.535 and p=0.067 respectively) confirms that the differences were insignificant. The distribution of outcomes for the patients in terms of course of action were similar (p=0.716) and the likelihood that a face-to-face consultation was avoided as well (p=0.557).

The one area where a significant difference was found was in the specialties to which the PCPs referred patients. Dermatology was the specialty most referred to by MDs as well as NPs, but in different proportions (24% compared to 17%). The second most referred to specialty was endocrinology (11% for both). The next most referred to specialties were different for the two groups of PCPs. For NPs, the other specialties most referred to were, in order: hematology, internal medicine and obstetrics/gynecology. On the other hand, for MDs, the other specialties most referred to were, in order: neurology, hematology and cardiology. These observed difference in distribution were found to be statistically significant (P=0.002).

It is important to note that further analysis is required to determine whether these differences are attributable solely to differences in referral patterns of NPs and MDs or to differences in patient populations. At the time of the study, descriptive data about the patient populations or PCPs was not available.

The results from the e-Consult pilot suggest that referral patterns between NPs and MDs are not meaningfully different. Legislation that differentially reimburses specialists based on the referring PCP (significantly lower for NPs than for MDs) is therefore not warranted based on referring patterns. Given that such differential remuneration could have important implications for the care received by patients of NPs, the legislation should be reconsidered.

References

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